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1916 - 1917

SIMON B. ELLIOTT
Member of the Forestry Commission July 2, 1904 to June 18, 1917.

Commonwealth of Pennsylvania

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REPORT

OF THE

Department of Forestry

OF THE

STATE OF PENNSYLVANIA

FOR THE

YEARS 1916-1917

2234

HARRISBURG, PA.
J. L. L. Kuhn, Printer to the Commonwealth.
1918.

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PENNSYLVANIA
DEPARTMENT OF FORESTRY

THE STATE FORESTRY RESERVATION COMMISSION

Robert S. Conklin, President, Columbia, Lancaster county.
S. B. Elliott,* Reynoldsville, Jefferson county.
Dr. J. T. Rothrock,† West Chester, Chester county.
William P. Stevenson, McVeytown, Mifflin county.
Edward Bailey,‡ Harrisburg, Dauphin county.
J. M. Hoffman, Johnstown, Cambria county.

OFFICE OF THE COMMISSIONER OF FORESTRY.

Commissioner of Forestry, Robert S. Conklin, Columbia, Lancaster county.

Deputy Commissioner of Forestry, Irvin C. Williams, Esq., Royersford, Montgomery county.

Clerk, A. Elwyn Strode, Camp Hill, Cumberland county.

Clerk, George W. Howard,§ Chester, Delaware county.

Clerk, Edward J. Davis,‖ Phoenixville, Chester county.

Division of Surveys, Chief, S. T. Moore, Mifflin county.

Division of Forest Protection, Chief, George H. Wirt, Franklin county.

Division of Publicity, Chief, N. R. McNaughton, Dauphin county.

Division of Silviculture, temporarily in charge, N. R. McNaughton, Dauphin county.

*Died June 18, 1917.
†Appointed July, 1917.
‡Appointed May 7, 1917.
§Died July 4, 1916.
‖Appointed September 1, 1916.

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LETTER OF TRANSMITTAL.

HON. MARTIN G. BRUMBAUGH, Governor.

Sir: I have the honor to present herewith the report of the Department of Forestry for the years 1916 and 1917.

Respectfully yours,

ROBERT S. CONKLIN,
Commissioner of Forestry.

Harrisburg, Pa., December 31, 1917.

Commonwealth of Pennsylvania.

REPORT OF THE COMMISSIONER OF FORESTRY FOR THE YEARS 1916-1917.

Additions by purchase to the area of the State Forests include 8,135 acres, 88 perches in 1916 and 5,593 acres, 74.47 perches in 1917. The total corrected area of the State Forests to January 1, 1918, is 1,017,-773 acres, 97.22 perches.

All purchases were additions to existing State Forests. No new forests were created during the period of this report. The detailed purchases are as follows:

Grantor.	County.	Acres.	Perches.	Total Amount.
1916.				
Coudersport Trust Co.,	Potter,	1,185	144	$2,075 33
Elias Deemer,	Potter,	813		
	Clinton,	753		3,826 00
	Cameron,	347		
J. W. Beecher,	Lycoming,	175	40	306 69
Charlotte K. Freyer,	Cumberland,	3,103	88	12,809 36
	Perry,	556	40	
George Dock Frey,	Cumberland,	99	67	801 87
	Perry,	129	110	
Frey & Mowery,	Cumberland,	54	92	229 29
	Perry,	10	150	
Edgar Wilson & C. J. Rose,	Pike,	617	66	1,543 53
William J. Garlin,	Perry,	207	140	519 69
Edward O. Spidle,	Cumberland,	76	80	750 00
Ezra T. Ealy,	Huntingdon,	5	31	30 00
		8,135	88	$22,891 70
1917.				
Milton F. & Mary E. Clark,	Potter,	99	136.8	$249 64
Asher D. Updegraff,	Lycoming,	53	67	146 90
Henry Hipple, Agent,	Clinton,	154	9	231 08
Frances H. Jacob,	Clinton,	200		300 00
Florence Keen,	Perry,	426	146.67	1,707 67
Lucy and Geo. B. Hilborn,	Lycoming,	818	97	1,227 91
O. M. Campbell and Janet Z. Jerald,	Lycoming,	476	89	714 83
John Ball,	Lycoming,	610	122	1,068 83
Nagle-Cook Lumber Co.,	Dauphin,	370	101	741 26
Charles W. Cook,	Dauphin,	83	159	167 99
William H. Rose,	Bedford,	509	9	1,145 38
O. M. Campbell and Jacob B. Tomb,	Lycoming,	399	88	699 21
Samuel W. Emery,	Clinton,	1,130	111	2,261 39
John Cruse Miller,	Bedford,	43	70	97 74
Samuel K. Clever, et al,	Cumberland,	215	149	431 86
		5,593	74.47	$11,191 69

Several thousand acres additional land are under contract but as the conveyance is conditioned upon purchasable titles, no statement or anything like an accurate estimate may be made of what is likely to be purchased in the near future.

At the beginning of the period of land purchases in this State it was recognized that the question of area would be a most difficult one. To ask each owner in each instance to furnish us with a correct survey and calculation of area in advance of purchase would in many instances have been a hardship and have prevented the purchase of desirable lands. The practice of the Commonwealth originally was, in making grants of land, to add six per cent to the area for roads. Probably the real principle involved was to give good measure because of the difficulties of making accurate surveys in that early day. Inasmuch, therefore, as the Commonwealth made its original grants by warrant areas and the allowance, it was deemed fair that in making repurchases for Commonwealth purposes, they should likewise be made using the areas of the original grants and allowances. The allowance is not calculated as a part of the area of the original warrant. The State pays a rate per acre for the original warrant area and any excess represented by the allowance is for the purpose of recouping the State for such losses as may occur in the making of accurate resurveys at a later date, or of putting the balance on the right side in correcting errors in the old surveys.

The condition of the record titles of much of the mountain land in Pennsylvania is highly unsatisfactory. Some tracts were never accurately located on the ground and were mere paper surveys. Others have gone through the vicissitudes of having adverse claimants. In this way double assessments resulted. From these facts it has always been recognized that some losses in purchased areas were likely to occur and for this reason the six per cent allowance is permitted to stand as a means by which the State shall recoup itself for all such losses. In fact, it is more than probable that at this time the purchased record area in the report might well be increased by about 4 per cent of itself, which increase added to the reported area would represent approximately the accurate present holding. We shall carry the purchased warrant areas as the present area of the State forests until such time as every forest may be definitely and accurately resurveyed, when careful and exact tables will be prepared of the areas as they then appear.

In case of partial warrants, purchases are made upon actual prior surveys required as a condition precedent to the conveyance. In such instances the areas conveyed are net and accurate and are not affected by the six per cent allowance. The partial warrants purchased are small in area in comparison with the areas purchased by original warrantee grants.

Because of difficulties of location, double assessments, overlaps and counter claims of a variety of kinds, losses have recently occurred in warrant areas amounting to 2, 156 acres, 138 perches. This area of loss, as explained above, is made up many times over by the six per cent allowance. The instances wherein these losses have occurred are the following:

The purchase of a warrant of 822 acres, 37 perches from William Whitmer & Sons Co., in Harris township, Centre county, was found to be the subject of a double assessment and was of such a nature that title examination could not disclose this defect. When the defect was discovered the purchase price of this area, amounting to $1850.02 being the price paid at $2.25 per acre, was returned by the grantor and on February 8, 1915, was deposited with the State Treasurer.

A loss of 177 acres, 14 perches, by a resurvey, was disclosed in purchase from the Perry Lumber Co. of tract located in Toboyne township, Perry county. The overrun in this purchase was of such size that the Department deemed it fair to set the loss off against the excess, still leaving in the hands of the Department an excess of several hundred acres not yet exactly calculated.

The Elizabeth McHenry tract of 1,000 acres in Chapman township, Clinton county, was bought at County Treasurer's tax sale in 1902. The price paid for the tract was $37.80. Recent surveys have disclosed the fact that this tract is non-existent, consequently its loss is accounted for.

The balance of the lost area, amounting to 157 acres, 87 perches, is the result of similar overlapping surveys and double assessments, which will be reported in full detail when the facts have been completely worked out. This is made up of a number of small areas located in different regions.

The whole forest area owned by the Commonwealth is divided into 52 State Forests, each one originally under the administration of a forester. The war has taken many foresters into the service so that consolidation had to follow and those remaining are at present caring for from two to four forests.

The great change in our economic conditions caused by the war has created an unusual demand for forest products of every character. Particularly is the call loud and long for wood suitable for gunstock and aeroplane manufacture, represented by the black walunt and the white ash. In this one instance alone is seen the wisdom of the State's purchase of lands for restoration to a timber producing condition. State ownership leads to better protection and wiser control. In order that the future call for forest materials of all kinds may be met, it is imperatively necessary that larger areas be acquired and restored to a productive condition. There is also an accompanying demand for additional equipment that speedy development may be accomplished and the forest put to its best and highest use at the earliest date.

THE PENNSYLVANIA FOREST SERVICE.

On September 15th, 1916, ten graduates from the State Forest Academy were added to the service as Foresters, and on October 1st an additional one was added. In 1917 eight men were graduated from the Academy, seven of whom went into military service, and one into private practice. These students completed the three years' course of instruction at the Forest Academy and were assigned to appropriate stations within the forest. The roster of foresters is given as of December 31, 1916, before any of the men entered Federal service in the National Army. Those who subsequently entered the service, to and including December 31, 1917, are indicated by the asterisk, and their present rank, station, and unit of service is indicated in a table following:

Forester.	Forest.	Address.
Avery, John E.,	Minisink,	Notch.
Baer, Chas. E.,	Bald Eagle,	Elimsport.
Barnes, L. G.,	Nittany,	Pleasant Gap.
Bartschat, W. J.,	Jacks Mountain,	Troxelville.
Bastian, John A.,[1]	Loyalsock,	Montoursville.
Bearer, V. M.,	Stuart,	Ligonier.
Beitsch, Tom O.,	Greenwood,	McAlevysfort, R. D. No. 1.
Bodine, A. W.,[2]	Rothrock,	Mount Union.
Bryner, H. E.,	Pennypacker,	New Germantown.
Blouse, J. R.,[3]*	Whetham,	Glen Union.
Byers, Wm. L.,	Bedford,	Rainsburg.
Conklin, Robert G.,	Caledonia,	Fayetteville.
Conklin, W. Gard.,*	Office,	Harrisburg.
Critchley, H. F.,*	Young Womans Creek,	North Bend.
Dague, Wm. F.,	Clearfield,	Clearfield.
Detz, Lewis M.,[4]	Office,	Harrisburg.
Dutlinger, F. H.,	Hopkins,	Renovo.
Elliott, Harry E.,[5]	Sinnemahoning,	Sinnemahoning.
Emerick R. Lynn,	Coudersport,	Coudersport.
Evans, W. B.,[6]	Sizerville,	Sizerville.
Fox, P. Hartman,	Austin,	Austin.
Golden, Thomas H.,	Ole Bull,	Cross Fork.
Harbeson, Thomas C.,	Blackwells,	Lloyd.
Hogeland, C. C.,[7]	Kishacoquillas,	Milroy.
Hogentogler, J. R.,*	McElhattan,	Loganton, R. D. No. 2.
Horning, W. H.,	Karthaus,	Karthaus.
Illick, J. S.,	Mont Alto,	Mont Alto.
Keller, John W.,	Bear Meadows,	Boalsburg.
Kirk, Carl L.,	Penfield,	Penfield.
Leach, Walter,*	Office,	Harrisburg.
Ludwig, Walter D.,	Johnstown,	Johnstown.

[1]Transferred from Loyalsock to Rothrock Forest October 1, 1917.
[2]Resigned September 15, 1917.
[3]Granted leave of absence for two years from March 1, 1917.
[4]Transferred from Office to Penn Forest October, 1917.
[5]Transferred from Sinnemahoning to Sizerville Forest October 1, 1917.
[6]Transferred from Sizerville to Mont Alto September, 1917.
[7]Transferred from Kishacoquillas Forest to Office in June, 1917.
*Engaged in military service.

Forester.	Forest.	Address.
McNaughton, N. R.,	Office,	Harrisburg.
McNeal, James E.,	Reading,	Reading.
McPherson, Benj. D.,*	Office,	Harrisburg.
Meek, Charles R.,*	Penn,	Coburn.
Metzger, Homer S.,	Tea Spring,	Loganton, R. D. No. 1.
Middour, Jos. C.,*	Caledonia,	Shippensburg, R. D. No. 3.
Montgomery, W. E.,*	Seven Mountain,	Spring Mills, R. D. No. 1.
Morgan, Howard H.,	Black,	Slate Run.
Morton, T. Roy,	Barree,	Petersburg.
Morton, J. Newton,*	Buffalo,	Laurelton.
Moyer, Marvin H.,[1]*	Slate Run,	Slate Run.
Mulford, Paul H.,	Stone,	Asaph.
Muller, Max E.,	Kettle Creek,	Hammersleyfork.
Mustin, Maurice,[2]	Office,	Harrisburg.
Neefe, Robert R.,	Pine,	Waterville.
Perry, George S.,	Brumbaugh,	Aitch.
Port, Harold F.,*	Stone,	Asaph.
Powers, James E.,[3]*		
Retan, George A.,	Mont Alto,	Mont Alto.
Rowland, H. B., Jr.,*	Office,	Harrisburg.
Rupp, Alfred E.,	Buchanan,	Fort Loudon.
Ryon, J. B.,[4]	Lushbaugh,	Sinnemahoning.
Sheeler, Geo. W.,*	Snow Shoe,	Snow Shoe.
Shenefelt, Ira L.,[5]*	Pocono,	East Stroudsburg.
Siggins, H. W.,*	Office,	Harrisburg.
Silvius, A. C.,	Buffalo,	Laurelton.
Smith, Edgar H.,*	Office,	Harrisburg.
Smith, E. S.,*	Pine Grove,	Pine Grove Furnace.
Smith, H. A.,*	McClure,	East Waterford.
Stadden, Robert W.,*	Promised Land,	Greentown, R. D. No. 1.
Staley, Lewis E.,	Mont Alto,	Mont Alto.
Strobeck, John L.,	Pocono,	Analomink.
VanHorn, H. C.,*	Hull,	Conrad.
Warfield, D. Kerr,	Kishacoquillas,	Milroy.
Wells, Arthur B.,*	Grays Run,	Fields Station.
Williams, John R.,	Pine Grove,	Pine Grove Furnace.
Winter, R. B..[6]	Office,	Harrisburg.
Wirt, George H.,	Office,	Harrisburg.
Zerby, Chas. E.,*	Medix,	Medix Run.
Ziegler, E. A.,*	Mont Alto,	Mont Alto.

[1]Leave of absence for two years beginning March 1, 1917.
[2]Resigned January 31, 1917.
[3]Left Pine Grove Forest to do military duty and afterwards was assigned to the Whetham Forest.
[4]Resigned October 1, 1917.
[5]Transferred from Pocono Forest to office, March, 1917.
[6]Returned to White Deer Forest in spring.
*Engaged in military service.

The roster of Forest Rangers on December 31, 1917, was as follows:

Ranger.	Post Office.	Forest.	Forester.
Amig, J. W.,	Richfield,	Shade Mt.,	
Armstrong, G. W.,	Westport,	Hopkins,	Dutlinger.
Ayers, A. W.,	Costello,	Hull,	Van Horn.
Bailey, C. M.,	Sinnemahoning,	Sinnemahoning,	Elliott.
Bailey, Robert G.,	Boalsburg,	Bear Meadows,	Keller.
Barbour, Jos.,	Pine Grove Furnace,	Pine Grove,	Williams.
Barbour, Oscar,	Pine Grove Furnace,	Pine Grove,	Williams.
Barndt, Wilson R.,	Somerset, R. D. No. 3,	Stuart,	Bearer.
Barr, Merritt A.,	Karthaus,	Karthaus,	Horning.
Benson, Daniel,	McAlevysfort, R. D. No. 1,	Greenwood,	Bietsch.
Bigelow, Clay W.,	Milroy, R. D.,	Kishacoquillas,	Warfield.
Boop, Howard J.,	McAlevysfort, R. D. No. 1,	Greenwood,	Bietsch.
Bixel, David F.,	Loganton,	McElhattan,	Metzger.
Brooks, M. N. U. L.,	Driftwood,	Medix,	Zerby.
Buck, William,	Odessa,	Karthaus,	Horning.
Campbell, O. M.,	Cammal,	Slate Run,	Neefe.
Carbaugh, Jas. E.,	Fayetteville,	Caledonia,	Conklin.
Carlin, J. V.,	Metal,	Buchanan,	Rupp.
Chandlee, Frank,	Slate Run,	Black,	Morgan.
Crum, R. M.,	Sinnemahoning,	Sinnemahoning,	Elliott.
Dean, H. J.,	Milroy, R. D. No. 1,	Kishacoquillas,	Warfield.
Deter, G. C.,	Graysville,	Barree,	Morton.
Ettinger, Wm. H.,	Troxelville,	Jacks Mt.,	Bartschat.
Fish, M. L.,	Lloyd,	Blackwells,	Harbeson.
Frank, Ferdinand,	Edgemere,	Minisink,	Avery.
Green, J. H.,	Coudersport,	Coudersport,	Emerick.
Grimes, Jas. E.,	Pine Grove Furnace,	Pine Grove,	Williams.
Harbeson, D. R.,	White Deer,	Tea Spring,	Metzger.
Hart, Herman N.,	New Germantown,	Pennypacker,	Bryner.
Hassler, B. F.,	Fayetteville,	Caledonia,	Conklin.
Hatton, Wm. K.,	Lords Valley,	Minisink,	Avery.
Hockley, Harvey,	Pine Grove Furnace,	Pine Grove,	Williams.
Hoover, Wm. R.,	Pleasant Gap,	Nittany,	Barnes.
Jenckes, E. N.,	Asaph,	Stone,	Mulford.
Johnston, Frank,	Penfield,	Penfield,	Kirk.
Kamp, Adam,	Lock Haven,	McElhattan,	Metzger.
Kauffman, W. L.,	Thornhurst,	Lackawanna,	
Keeney, Milton,	Cross Fork,	Ole Bull,	Golden.
Koontz, Leroy,	New Germantown,	Pennypacker,	Bryner.
Lebo, Samuel,	Lucullus,	Pine,	Neefe.
Libby, David,	Weikert,	Penn,	Detz.
Lightner, S. H.,	Cottage,	Barree,	Morton.
Lipp, Geo. M.,	Moutoursville,	Loyalsock,	Neefe.
Manley, Joseph,	Montgomery, R. D. No. 2,	Bald Eagle,	Baer.
Maurer, Wm. C.,	Troxelville,	Jacks Mt.,	Bartschat.
McElwee, James,	Orrtanna, R. D. No. 2,	Caledonia,	Conklin.
McKinney, Wm. F.,	Spring Mills, R. D. No. 3,	Seven Mt.,	Detz.
Merrill, R. K.,	Glen Union,	Whetham,	Dutlinger.
Middleswarth, C. J.,	Troxelville,	Jacks Mt.,	Bartschat.
Miller, Jacob,	Bushkill,	Pocono,	Strobeck.
Monsell, John,	Reedsville, R. D. No. 1,	Greenwood,	Bietsch.
Motz, Carl,	Woodward,	Buffalo,	Silvius.
Nelson, John,	Clearfield,	Clearfield,	Dague.
Newman, L. T.,	Fields Station,	Grays Run,	Neefe.
Olson, Henry M.,	Cross Fork,	Ole Bull,	Golden.
Oppel, Herman A.,	Wistie,	Rothrock,	Bastian.
Perry, Harry B.,	Fayetteville,	Caledonia,	Conklin.
Pidcoe, G. H.,	Williamsport, R. D. No. 1,	Loyalsock,	Neefe.
Reitz, Robert,	Charter Oak,	Bear Meadows,	Keller.
Rellihan, John T.,	Lock Haven,	Crawford,	Dutlinger.
Riviere, E. T.,	Milford,	Westfall,	
Roadarmel, S. M.,	Mifflinburg, R. D. No. 2,	White Deer,	Winter.
Rogers, L. W.,	Waterville,	Pine,	Neefe.
Ross, G. Edw.,	McAlevysfort, R. D. No. 1,	Greenwood,	Bietsch.
Schwab, Robert,	Leetonia,	Blackwells,	Harbeson.
Seese, Howard P.,	Renovo,	Hopkins,	Dutlinger.
Shaffer, John S.,	Mont Alto,	Mont Alto,	Staley.
Shoemaker, A. L.,	Beech Creek,	Snow Shoe,	Dutlinger.
Smith, J. F.,	Chambersburg, R. D. No. 4,	Buchanan,	Rupp.
Smith, Edw. H.,	Rainsburg,	Bedford,	Byers.
Staley, Harry,	Mont Alto,	Mont Alto,	Staley.
Stover, L. M.,	Livonia,	White Deer,	Winter.
Stull, Henry L.,	Fayetteville,	Caledonia,	Conklin.
Sundy, F. P.,	McCrea,	Pennypacker,	Bryner.
Welshans, J. W.,	Loganton,	Tea Springs,	Metzger.
Will, O. D.,	Slate Run,	Black,	Morgan.
Winkebleck, John,	Beech Creek,	Snow Shoe,	Dutlinger.
Wirth, William,	Milroy,	Kishacoquillas,	Warfield.
Wykoff, L. C.,	Firstfork,	Lushbaugh,	Elliott.
Ziegler, John H.,	East Waterford,	McClure,	Bryner.

Changes in the service during the two years covered by this report were as follows:

FORESTERS APPOINTED.

Name.	Forest.	Date.
Ira L. Shenefelt,	Pocono,	Sept. 15, 1916.
Benj. D. McPherson,	Office,	Sept. 15, 1916.
Joe R. Blouse,	Whetham,	Sept. 15, 1916.
J. Newton Morton,	Buffalo,	Sept. 15, 1916.
Chas. C. Hogeland,	Kishacoquillas,	Sept. 15, 1916.
Marvin H. Moyer,	Slate Run,	Sept. 15, 1916.
Harold F. Port,	Stone,	Sept. 15, 1916.
Lewis M. Detz,	Office,	Oct. 1, 1916.
E. S. Smith,	Pine Grove,	Sept. 15, 1916.
J. C. Middour,	Caledonia,	Sept. 15, 1916.
H. A. Smith,	McClure,	Sept. 15, 1916.
John E. Buch,	Students (3d year) at the Forest Academy who entered military service just prior to graduation, and did not take their assignments, except Mr. Windle, who retired.	
Edwin B. Miller,		
Josef B. Harlacher,		
Ralph W. Musser,		
Saml. W. Windle,		
L. Edgar McNulty,		
Howard E. Breneman,		
Lloyd D. Root,		

FORESTERS TRANSFERRED.

Name.	Forest.	Date.
John A. Bastian,	Rothrock,	October 1, 1917.
Lewis M. Detz,	Penn,	October, 1917.
Harry E. Elliott,	Sizerville,	October 1, 1917.
W. B. Evans,	Mont Alto,	September, 1917.
C. C. Hogeland,	Office,	June, 1917.
Walter Leach,	Office,	March, 1917.
W. E. Montgomery,	Mont Alto,	August, 1917.
James E. Powers,	Whetham,	June, 1916.

FOREST RANGERS APPOINTED.

Name.	Forest.	Date.
Clay W. Bigelow,	Kishacoquillas,	December 20, 1915.
Robert I. Brown,	Pine Grove,	January 1, 1916.
James E. Grimes,	Pine Grove,	August 1, 1917.
Joseph Barbour,	Pine Grove,	August 1, 1917.
Oscar Barbour,	Pine Grove,	August 1, 1917.
Harvey Hockley,	Pine Grove,	August 1, 1917.
Ralph Limbaugh,	Pine,	August 1, 1917.
Wm. R. Hoover,	Nittany,	August 1, 1917.
L. T. Newman,	Grays Run,	August 1, 1917.
John Long,	Sizerville,	August 1, 1917.
Jacob Miller,	Pocono,	August 1, 1917.
Robert G. Bailey,	Bear Meadows,	September 15, 1917.
Daniel F. Bixel,	McElhattan,	September 15, 1917.
Walter Sutch,	Young Womans Creek,	October 15, 1917.
John H. Ziegler,	McClure,	October 15, 1917.

DEATHS AND RESIGNATIONS.

Name.		Date.
Russell Fawley, Forester,	Resigned,	January 31, 1916.
W. Elmer Houpt, Forester,	Resigned,	February 1, 1916.
B. B. McCool, Forester,	Resigned,	February 1, 1916.
Walter M. Mumma, Forester,	Resigned,	March 1, 1916.
D. K. Meredith, Forest Ranger,	Resigned,	March 1, 1916.
Chas. E. Leonard, Forest Ranger,	Died,	March 5, 1916,
Robert I. Brown, Forest Ranger,	Resigned,	June 8, 1916.
R. E. McCoy, Forest Ranger,	Resigned,	June 30, 1916.
Edgar Wilson, Forest Ranger,	Resigned,	June 30, 1916.
Harry VanCleve, Forest Ranger,	Resigned,	July 31, 1916.
Jerome J. Wheeler, Forest Ranger,	Resigned,	August 31, 1916.
Jesse M. Houtz, Forester,	Resigned,	August 31, 1916.
John L. Witherow, Forester,	Resigned,	September 15, 1916.
Maurice Mustin, Forester,	Resigned,	January 31, 1917.
Charles E. Woof, Forester,*	Resigned,	September 30, 1916.
Chas. Hemmerly, Forest Ranger,	Resigned,	March 31, 1917.
C. A. Swartz, Forest Ranger,	Resigned,	April 1, 1917.
John Long, Forest Ranger,	Resigned,	August 4, 1917.
Leon F. Lewis, Forest Ranger,	Resigned,	August 31, 1917.
W. H. Harpster, Forest Ranger,	Resigned,	September 1, 1917.
M. A. Fourness, Forest Ranger,	Resigned,	October 15, 1917.
John Bricker, Forest Ranger,	Resigned,	November 7, 1917.

*Forester Woof after leaving the service entered into the employ of the Philadelphia and Reading Railway, and met his death accidentally at Rutherford on March 3, 1917.

THE GREAT WAR.

The entrance of the Government of the United States into the German War on April 6, 1917, was the signal for many of the foresters, former foresters, students, and employes to think of immediate entry into the service. Most of these young men, trained at the Forest Academy, were of exceptional fitness for military service and were accepted as rapidly as they offered themselves. The majority entered by voluntary enlistment. Their names, ranks, and units of service are indicated in the following table:

Blouse, Joe R. ('16), Aviation Corps, Columbus, Ohio.
Breneman, Howard E. ('17), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Buch, John Edward ('17), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Conklin, W. Gard, 1st Lt. (('08), Co. D, 8th Bat., 20th Eng. (Forest), A. E. F.
Critchley, H. F., 2d Lt. ('13), 328th Field Artillery, Camp Custer, Mich.
Gilbert, Paul, Sergt., 228th Aero Squadron, A. E. F.
Harlacher, Josef ('17), Co. B, 1st Bat., 20th Eng. (Forest), A. E. F.
Hogentogler, J. R. ('12), Battery F, 108th Field Artillery, Camp Hancock, Augusta, Ga.
Horning, W. Harold ('14), Co. D, 10th Bat., 20th Eng. (Forest), A. E. F.
*Houpt, W. E. ('09), Co. F, 2d Bat., 20th Eng. (Forest), A. E. F.
*Houtz, Jesse M., 2d Lt. ('13), 310th Field Artillery, Camp Meade, Md.
*Irwin, James A., Sergt. ('12), Co. C., 1st Bat., 10th Eng. (Forest), A. E. F.
Leach, Walter ('14), Headquarters Company, 314th Infantry, A. E. F.
McNulty, L. Edgar ('17), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
McPherson, Benj. D. ('16), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Meek, Charles R., Sergt. ('12), Co. D, 4th Bat., 10th Eng. (Forest), A. E. F.
Middour, Joseph C. ('16), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Miller, Edwin B. ('17), Co. C., 1st Bat., 10th Eng. (Forest), A. E. F.
Montgomery, W. E., 2d Lt. ('13), 335th Field Artillery, Camp Dix, N. J.

*Former foresters, not in State service at time of enlistment.

Morton, J. Newton ('16), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Moyer, Marvin H. ('16), Co. B, 5th Bat., 20th Eng. (Forest), A. E. F.
Musser, Ralph W. ('17), Co. B, 305th Field Signal Bat., A. E. F.
Port, Harold F. ('16), Co. A, 1st Bat., 10th Eng. (Forest), A. E. F.
Powers, James E., Master Engineer ('15), Headquarters Detachment, 103rd Engineers, A. E. F.
*Robinson, Milton O. ('12), Co. 5, E. R. O. T. C., Camp Lee, Petersburg, Va.
Root, Lloyd D. ('17), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Ross, Roy B. Sr. Master Engineer, Headquarters Co., 5th Bat., 20th Eng., (Forest), A. E. F.
Rowland, Horace B. Jr., ('15), Co. F., 1st Bat., 10th Eng. (Forest), A. E. F.
*Seltzer, John W., 1st Lt. ('09), 10th Engineers (Forest), A. E. F.
Sheeler, Geo. W., Sergt. ('12), Co. C., 502d Engineers, A. E. F.
Shenefelt, Ira L., 2d Lt. ('16), Field Artillery, N. A., Saumur Artillery School, A. E. F.
Siggins, H. W. ('14), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
Smith, Edgar H., 1st Lt. ('11), Co. M, 316th Infantry, Camp Meade, Md.
Smith, Edward S. ('16), Co. B, 3d Bat., 20th Eng. (Forest), A. E. F.
Smith, H. A. ('16), Co. A, 1st Bat., 10th Eng. (Forest), A. E. F.
Stadden, Robt. W. ('14), Co. C, 1st Bat., 10th Eng. (Forest), A. E. F.
VanHorn, Harry C. ('14), Co. A, 1st Bat., 10th Eng. (Forest), A. E. F.
Wells, Arthur B. ('11), Battery E, 76th Field Artillery, A. E. F.
Ziegler, E. A., Major, Coast Artillery Service, Fort Monroe, Va.

In addition to the foregoing, Ranger Harry L. Thomas and John Thomas enlisted in the service and are doing duty with Co. C, of the 1st Battalion of the 10th Engineers (Forest).

The desire to serve the country not only took possession of a large number of our foresters, but extended even to the students at the Forest Academy. From this small group the following persons have entered the Army:

Bradley, Tom O. ('19), Co. B, 3d Bat., 20th Eng. (Forest), A. E. F.
Loetzer, Louis C. ('19), Co. A, 41st Bat., 20th Eng. (Forest), American University Camp, Washington, D. C.
Mosch, Walter ('19), Co. E, 4th Bat., 20th Eng. (Forest), A. E. F.
Rowland, Arthur L. ('18), Co. B, 3d Bat., 20th Eng. (Forest), A. E. F.
Senft, Walter M. ('19), Cadet U. S. Aviation School, Richfield, Waco, Texas.
VanArsdall, Howard, 2d Lt. ('18), Troop I, 8th Cavalry, Presidio, Tex.

Prof. E. A. Ziegler, Director of the Academy, left in May after turning the institution over to Prof. Illick, and was rapidly followed by an exodus of students.

*Former Foresters, not in State service at time of enlistment.

FOREST PROTECTION.

The Bureau of Forest Protection is now fully organized under the direction of George H. Wirt, Chief Forest Fire Warden, who was assisted by H. W. Siggins as clerk until August, 1917, when he entered military service. For a period of one month from August 23rd to

September 29th Miss Edith Shaffer rendered temporary service. Miss Laura Bomberger of Manheim took Mr. Siggins' place on October 1, 1917.

Competent fire wardens have now been appointed in every region in the State where fire is likely to occur, and these officers have been rendering capable and acceptable service. The Commonwealth has been divided into 21 fire districts in which later on will be placed District Fire Wardens, provided for by the act of 1915.

The Chief Forest Fire Warden has prepared and there have been published two exhaustive fire reports for the years 1916 and 1917, the period covered by this report. There is, therefore, set forth here only a condensed resume, the reader being referred to the detailed reports for fuller information and discussion. These reports were published as Bulletin No. 13 and Bulletin No. 16.

The fire seasons of 1916 were unfavorable for the starting of fires and the new organization of wardens was able to keep them well in control. The long dry fall, however, carried fire season into the middle of December. In 1917 the seasons were favorable to fires and we had an unusual number reported. There has never been a time when all fires have been reported and perhaps the better organization of patrolmen, watch towers, and wardens is bringing to our attention more fires than ever before. The following tables set forth the condition of affairs for the two years covered by this report and in some instances, figures for 1915, by way of comparison.

AREA, DAMAGE, AND COST OF EXTINCTION OF FOREST FIRES IN 1916 AND 1917.

County.	Number.		Area.		Damage.		Cost of Extinction.	
	1916	1917	1916	1917	1916	1917	1916	1917
Adams,	9	37	526	2,654.37	$1,606	$5,683	$107 65	$470 90
Allegheny,								
Armstrong,	10	17	222	670.5	917	3,017	38 10	112 65
Beaver,								
Bedford,	46	62	4,996	12,497.75	4,703	18,681	483 16	1,237 53
Berks,	27	22	2,225	1,037.25	5,112	3,465	305 71	236 36
Blair,	41	56	17,977	14,077.56	19,743	27,138	636 69	1,184 16
Bradford,	3	20	47	756.50	32	4,741	17 00	157 79
Bucks,	4	5	35	412.01	74	333	20 05	34 01
Butler,	1	2	60	520.00			9 85	
Cambria,	31	66	614	5,846.90	3,233	4,914	139 75	609 64
Cameron,	15	17	8,207	1,981.00	7,445	2,123	196 55	152 50
Carbon,	33	52	7,466	10,300.25	10,429	22,642	376 73	768 02
Centre,	47	90	9,143	16,586.92	8,161	36,838	1,556 20	1,401 84
Chester,	5	11	454	318.00	4,686	7,592	54 02	60 12
Clarion,	2	8	7	2,257.00	26	75	13 35	188 25
Clearfield,	14	49	3,482	6,472.50	1,071	16,887	177 95	636 50
Clinton,	56	71	6,701	12,385.35	23,330	14,722	529 40	577 26
Columbia,	8	34	3,248	5,392.75	17,725	8,144	187 88	371 48
Crawford,	2	6	752	175.00		320	4 75	
Cumberland,	20	21	1,517	3,581.75	2,019	6,086	180 01	444 60
Dauphin,	20	75	3,604	21,393.33	6,466	25,473	307 94	1,637 26
Delaware,				55.00				
Elk,	14	54	1,380	18,889.35	2,792	14,745	581 56	891 92
Erie,								
Fayette,	26	47	3,908	6,078.75	7,247	13,027	316 10	677 09
Forest,	8	13	337	1,267.00	25	800	23 30	44 60
Franklin,	75	89	1,526	6,733.11	2,219	7,244	541 90	1,253 10

Plate 1. Steel Tower on Sand Mount, White Deer Forest, built August, 1917.

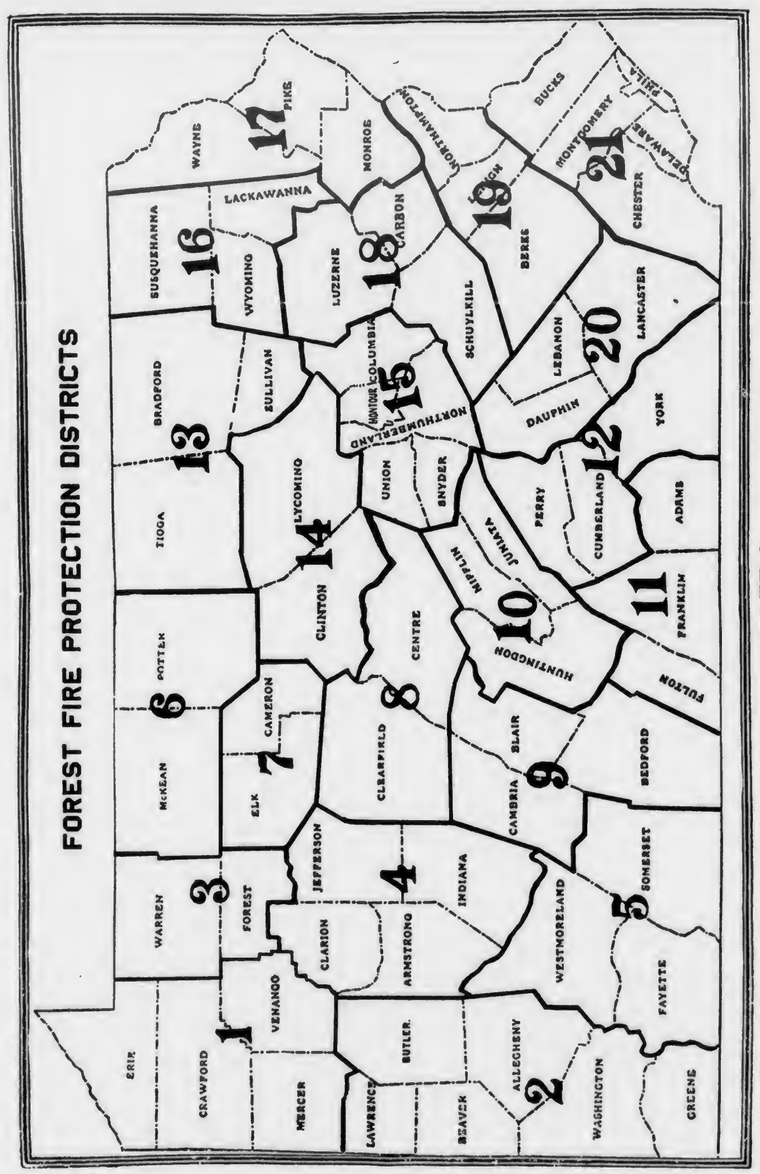

PLATE 2.

AREA, DAMAGE, AND COST OF EXTINCTION OF FOREST FIRES IN 1916 AND 1917—Continued.

County.	Number.		Area.		Damage.		Cost of Extinction.	
	1916	1917	1916	1917	1916	1917	1916	1917
Fulton,	18	18	1,200	1,433.00	2,362	1,538	276 05	413 80
Greene,								
Huntingdon,	34	69	7,610	7,382.11	10,118	15,762	963 41	709 64
Indiana,	5	18	457	1,424.50	3,400	2,301	81 70	144 28
Jefferson,	2	9	16	538.75		2,664	6 88	109 60
Juniata,	16	31	3,602	13,136.50	6,081	71,902	206 76	837 24
Lackawanna,	12	29	3,050	3,417.00	3,410	3,271	233 68	379 86
Lancaster,	2	8	350	1,604.00	2,525	10,070	63 81	140 65
Lawrence,								
Lebanon,	2	11	1,100	2,592.25	1,200	3,325	55 35	116 23
Lehigh,	8	10	443	3,532.00	1,560	11,715	75 41	387 09
Luzerne,	49	121	15,859	21,537.00	15,172	35,375	1,020 67	1,461 86
Lycoming,	27	56	5,009	21,359.50	10,520	58,919	439 16	2,297 65
McKean,	6	21	625	900.50	406	743	58 41	95 41
Mercer,	1		6					
Mifflin,	18	34	2,472	8,158.76	4,294	16,792	356 61	902 09
Monroe,	42	111	1,128	10,066.38	1,394	13,384	174 95	1,162 47
Montgomery,	2		11					
Montour,								
Northampton,	1	21	1	2,469.75		3,420	2 80	212 37
Northumberland,	13	58	656	13,720.51	578	24,200	79 55	640 17
Perry,	15	34	290	4,338.61	1,238	7,352	136 84	1,071 73
Philadelphia,								
Pike,	16	26	2,871	7,407.00	4,459	5,760	218 52	440 10
Potter,	30	57	13,385	1,509.70	10,843	3,231	645 69	291 45
Schuylkill,	37	123	3,092	13,360.75	8,491	27,655	394 31	1,422 32
Snyder,	9	8	2,205	366.50	1,455	684	238 22	115 27
Somerset,	25	86	1,940	9,905.20	4,533	26,910	197 58	1,330 89
Sullivan,	23	39	542	2,555.00	286	1,354	180 36	393 20
Susquehanna,	1	8	25	46.75		70	2 95	22 90
Tioga,	14	33	2,547	2,894.00	903	3,606	203 61	371 43
Union,	9	19	902	3,403.57	1,408	4,001	173 81	567 55
Venango,	3	4	306	993.00	1,745	6,025		35 35
Warren,	7	14	155	1,017.00	310	1,290	57 63	70 43
Washington,								
Wayne,	10	19	955	1,724.00	2,585	2,685	115 65	302 08
Westmoreland,	27	40	2,169	3,109.50	2,361	6,983	324 00	357 66
Wyoming,	9	20	702	982.00	1,381	1,380	102 15	223 29
York,	3	8	547	84.00	2,232	125	21 68	44 75
Total,	1,013	2,087	154,752	319.359	$236,292	$619,182	$13,913 80	$30,218 99

COMPARISON BY MONTHS.

	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
1915,		3	84	739	94	18	1			34	119	9	1,101
1916,	4		9	181	307	5	2	23	30	127	220	115	1,013
1917,	2	6	142	897	688	8	1	4	8	13	313	4	2,087

COMPARISON BY CAUSES.

	Railroads.	Brush burning.	Incendiary.	Campers.	Lumbering.	Lightning.	Miscellaneous.	Unknown.	Total.
1915,	274	105	120	136	28	19	37	382	1,101
1916,	270	55	95	182	44	10	45	312	1,013
1917,	753	173	127	260	45	3	52	731	2,087

COMPARISON BY ACREAGE.

	Less Than 1 Acre.		1 to 100 Acres.		100 to 1,000 Acres.		More Than 1,000 Acres.		Total.	
	Number.	Acres.	Number.	Acres.	Number.	Acres.	Number.	Acres.	Number.	Acres.
1915,	61	31	639	20,637	323	115,116	73	200,851	1,101	336,635
1916,	103	25	662	14,269	220	60,568	28	79,890	1,013	154,752
1917,	237	57.87	1,264	27,532	521	149,482	66	141,228	2,087	319,339

STATE FOREST LAND BURNED—1915, 1916 AND 1917.

County.	Area Burned.		
	1915.	1916.	1917.
Adams,	1,540	134	1,653
Bedford,	125	160	----------
Cameron,	1,410	6,085	507
Centre,	2,408	5,134.2	227.5
Clearfield,	25	3.2	140
Clinton,	13,275	472.5	1,070.3
Cumberland,	5,550	892.5	935
Dauphin,	2,000	----------	105
Elk,	135	100	200
Franklin,	502	604.6	3,293.6
Fulton,	----------	----------	----------
Huntingdon,	17	5,473.3	206
Juniata,	----------	327.7	----------
Lackawanna,	----------	800	150
Lycoming,	2,704	1,780.1	3,900
Mifflin,	137	1,597.1	640.5
Monroe,	----------	----------	50
Perry,	2,150	----------	800
Pike,	6,155	394	335
Potter,	365	186.8	160
Snyder,	2,825	1,615	----------
Somerset,	78	----------	----------
Tioga,	105	1,178	66
Westmoreland,	70	----------	----------
Union,	387	786	3
Wyoming,	----------	----------	----------
Total,	41,963	27,718	14,441.9

During the two years there has been a great fluctuation in the number of forest fire wardens. On September 1, 1915 when the Bureau of Forest Protection was organized there were upon the rolls, the names of 1,741 wardens. This was reduced to about 1,500 by January 1, 1916, by dropping many inactives and accepting resignations. By January 1, 1917, there were 1,784 and by December 31, this number was reduced to 1,463 including State Foresters, State Forest Rangers, and Game Protectors. Practically all of these men are now active.

The following tables indicate the growth of the patrol service in 1916 and 1917. These men are doing duty in bad fire regions. They catch many small fires and extinguish them before they do much damage. By their activities in visiting sawmill owners and brush burners they prevent many fires:

FOREST FIRE PATROL SERVICE DURING 1916.

County.	Number of Men.						Salaries Paid.	
	April.	May.	September.	October.	November.	December.	Associations.	State.
Cambria,	------	------	------	------	1	------	----------	$25 00
Centre,	1	2	2	4	6	------	$56 38	126 37
Clinton,	------	------	------	2	2	------	----------	125 00
Huntingdon,	------	------	2	2	3	3	----------	243 87
Juniata,	------	------	------	------	1	1	----------	44 04
Lycoming,	------	------	1	1	1	1	----------	158 22
Mifflin,	------	------	1	1	1	1	----------	120 00
Monroe,	6	6	4	5	7	------	545 01	544 99
Potter,	------	------	1	1	1	------	----------	120 00
Tioga,	------	------	------	2	2	------	----------	86 48
Westmoreland,	------	------	------	------	1	------	----------	15 75
Total,	7	8	11	18	26	6	$601 39	$1,609 72

SUMMARY OF PATROL SERVICE, 1917.

County.	Number of Men.							Paid by Department.	Paid by Association.	Paid from Protection Fund.
	April.	May.	June.	September.	October.	November.	December.			
Adams,	2	2						$68 80		$80 00
Bedford,	3	3						71 60		110 40
Blair,						1				22 50
Bradford,	1	1						24 00		20 00
Cambria,	1	1			2	2				150 00
Cameron,	4	4						45 40		68 60
Centre,	7	12			2	4	1	65 33	$82 50	596 70
Clearfield,	1	3								123 67
Clinton,	4	6						45 00		297 40
Cumberland,	1	4						45 00		165 00
Elk,	2	1				1		72 78		64 47
Fayette,	1	1			1	1				19 71
Franklin,	9	11			14	14		22 50		293 00
Fulton,	11	11			26	26				194 60
Huntingdon,	4	8			1	5	1	92 40		337 60
Luzerne,					1	1	1			92 02
Lycoming,	1	4						45 00		160 00
Mifflin,	2	2	2			2	2	77 40		164 00
Monroe,	7	10	4	2	4	4	2		538 47	585 47
Pike,	1	2			1	1	1	27 00		127 20
Potter,	3	5		1	1	1	1	84 00		253 65
Somerset,						2				24 30
Tioga,	5	3	1					57 46		80 00
Union,	2	2						69 20		95 00
Westmoreland,					1	2				65 65
Total,	72	96	7	3	54	67	9	$912 87	$620 97	$4,190 34

There are now four active Forest Protective Associations in the State. The oldest, the Pocono Protective Fire Association has been conducting a valuable educational campaign, has increased its list of members greatly, has built and maintained three towers, held annual meeting of wardens, and aroused neighborhood interest. It paid out in 1916 and 1917, $2,859.21, and had $731.93 on hand December 31, 1917.

The Central Pennsylvania Forest Fire Protective Association carried on its educational campaign, built telephone lines, opened old woods roads, had a meeting of wardens and maintained patrol. Its expenditures in 1916 were $483.88, with balance of $319.21 on hand December 31, 1917. Its account for 1917 is not available, the secretary having entered the U. S. service late in the fall.

The McKean County Protective Fire Association was organized in October of 1916. Not much was done that year but in 1917 it began reorganizing the protective force of the county and by the end of the year had made itself felt for good. It has spent $226.12 and had $499.18 on hand December 3, 1917.

The Anthracite Forest Protective Association was organized in April, 1917 and has been busy reorganizing the force of wardens and getting members. It spent during the year, $281.06, and had a balance of $1,362.45 on hand December 31, 1917.

OBSERVATION STATIONS AND TELEPHONE LINES, DECEMBER 31, 1917.

Name.	Steel.	Wooden.	Tree.	Bare.	Elevation above sea.	Height of station above Ground.	Constructed.	County.	Telephones. Miles State owned.	Telephones. Number telephones installed.
Austin Forest.										
Lookout Mountain,				×	2,200			Potter,		
Paper Mill Knob,				×	2,100			Potter,		
Bailey Run Fork, Hill Knob,				×	2,200			Potter,		
Moore's Run Fork, Hill Knob,				×	2,200			Potter,		
Corwin's Farm,				×	2,100			Potter,		
Bald Eagle Forest.										
Williamsport Road, Bald Eagle Mountain,				×	1,957			Lycoming,		
Nippenose Road,				×	1,735			Lycoming,		
Maple Hill,				×	1,700			Lycoming,		
Barree Forest.										
Big Turn Lookout,			×		2,000	20 ft.	1910	Huntingdon,		
Lightner's Hill,				×	1,600			Huntingdon,		
Furnace Road,				×	2,000			Huntingdon,		
Ewing Path,				×	2,300			Huntingdon,		
Brewer Patch,				×	2,100			Huntingdon,		
Green's Knob,				×	1,700			Huntingdon,		
Diehl's Hill,				×	1,200			Huntingdon,		
Bear Meadows Forest.										
Little Flat,		×			2,430	38 ft.	1916	Centre,	4½	2
Whipple,		×			1,040	38 ft.	1916	Huntingdon,		
Little Flat,					2,400	25 ft.	1917	Centre,		
First Mountain,			×		2,100	35 ft.	1917	Centre,		
Second Mountain,			×		2,260	30 ft.	1917	Centre,		
Laurel Run,			×		2,160	35 ft.	1917	Centre,		
Beidler,			×		1,660	30 ft.	1917	Huntingdon,		
Sand Knob,			×		1,940	20 ft.	1917	Huntingdon,		
Pine Swamp,			×		1,900	30 ft.	1917	Huntingdon,		

OBSERVATION STATIONS AND TELEPHONE LINES, DECEMBER 31, 1917—Continued.

Name.	Steel.	Wooden.	Tree.	Bare.	Elevation above sea.	Height of station above ground.	Constructed.	County.	Telephones. Miles State owned.	Telephones. Number telephones installed.
Barree,			x		2,000	30 ft.	1917	Centre,		
Pine Grove,			x		2,010	35 ft.	1917	Huntingdon,		
Musser Path,			x		2,000	15 ft.	1917	Huntingdon,		
Bedford Forest.										
Knob,			x		2,000	40 ft.	1912	Bedford,		
Martin Hill,			x		3,000	25 ft.	1912	Bedford,		
Black Forest.										
Pump Station,		x			2,150	35 ft.	1914	Lycoming,	9	4
Blackwell Forest.										
Gleason Hill,	x				2,000	50 ft.	1914	Tioga,	14½	7
West Hill,		x			1,900	30 ft.	1915	Tioga,		
Bull Run,			x		2,000	60 ft.	1914	Tioga,		
Big Ridge,			x		2,000	40 ft.	1914	Tioga,		
Fork Hill,			x		1,900	50 ft.	1914	Tioga,		
Tannery Hill,			x		1,900	50 ft.	1914	Tioga,		
Brumbaugh Forest.										
Old Forge,				x	1,450			Huntingdon,		
Raven Rock,				x	1,400			Huntingdon,		
Coalmont,				x	1,700			Huntingdon,		
Laurel Run,		x			1,800	50 ft.		Huntingdon,		
Buchanan Forest.										
Keefer Gap,			x		1,950	42 ft.	1915	Franklin,	7½	2
Cowan,		x			1,900	45 ft.	1914	Fulton,		
Big Knob,			x		2,440	43 ft.	1914	Fulton,		
Buffalo Forest.										
			x		2,150	70 ft.	1911	Union,		
Branch Mountain,				x	2,060			Union,		

Caledonia Forest.										
Piney Mountain,	x				1,550	52 ft.	1914	Adams,	19⅛	7
Sandy Sod,			x		2,030	25 ft.	1915	Franklin,		
Polk Hill,			x		1,600	35 ft.	1917	Franklin,		
High Rock (Green Ridge),				x	2,010			Adams,		
Rocky Mountain,				x	1,860			Franklin,		
Chatham and Stone Forests.										
U. S. G. S.,		x			2,334	30 ft.	1899 Rep. '11	Tioga,	¾	
Broad Ridge,			x		2,200	40 ft.	1916	Tioga,		
Frying Pan,			x		2,300	50 ft.	1910-11	Tioga,		
Goodall,			x		2,300	50 ft.	1910-11	Tioga,		
Harrisons,				x	2,300			Tioga,		
Bear Run,				x	2,300			Tioga,		
Mt. Tom,				x	2,300			Tioga,		
Big Fire Line,				x						
Mill Run,				x	2,300			Tioga,		
Sand Bed,				x	2,300			Tioga,		
Roberts Branch,				x	2,300			Tioga,		
Asaph,				x	2,300			Tioga,		
DeLoy,				x	2,300			Tioga,		
Oak Ridge,				x	2,300			Tioga,		
Pinafore,				x	2,300			Tioga,		
Kinney,				x	2,300			Tioga,		
					2,300			Tioga,		
Clearfield Forest.										
Smith Place,			x		2,300	40 ft.	1914	Clearfield,	10	7
Grays Run Forest.										
Round Top,				x	2,200			Lycoming,		
Elk Knob,				x	2,200			Lycoming,		
Greenwood Forest.										
Saeger,		x			1,050	30 ft.	1917	Huntingdon,		
Brush Ridge,		x			1,223	47 ft.	1913	Huntingdon,		
Zook,			x		1,600	50 ft.	1916	Huntingdon,		
Nigger,			x		950	50 ft.	1916	Huntingdon,		
Johnson,			x		1,500	40 ft.	1911	Mifflin,		
Milliken,			x		2,340	20 ft.	1910	Mifflin,		
McNitt,			x		1,020	30 ft.	1910	Mifflin,		
Stone Mountain,			x		2,000	40 ft.	1907	Huntingdon,		
Broad Mountain,			x		2,230	20 ft.	1906	Huntingdon,		
Hopkins Forest.										
Long Ridge,			x		2,100	25 ft.	1910	Clinton,	10½	2
Pine Watch,			x		1,900	25 ft.	1911	Clinton,		
Halls Rocks,			x		2,000	23 ft.	1913	Clinton,		
Birch Rocks,				x	2,200			Clinton,		
Preserve Lookout,			x		2,200	25 ft.	1916	Clinton,		
Scrub Flat,			x		2,200	35 ft.	1917	Clinton,		

OBSERVATION STATIONS AND TELEPHONE LINES, DECEMBER 31, 1917—Continued.

Name.	Steel.	Wooden.	Tree.	Bare.	Elevation above sea.	Height of station above ground.	Constructed.	County.	Telephones. Miles State owned.	Telephones. Number telephones installed.
Hull Forest.										
Mud Lick,		x			2,100		1913	Potter,	17½	4
Indian Shanty,			x		2,100		1913	Potter,		
Rock Ridge,			x		2,200		1913	Potter,		
Round Top,			x		2,200	30 ft.	1915	Potter,		
Rock Ridge No. 2,			x		2,200	55 ft.	1915	Potter,		
Jacks Mountain Forest.										
Booney,			x		1,876	15 ft.	1914	Snyder,		
Middle Ridge,			x		1,802	25 ft.	1910	Snyder,		
High Top,			x		2,095	40 ft.	1910	Snyder,		
Eastern Kettle,				x	2,080			Snyder,		
Middle Ridge,				x	1,909			Snyder,		
High Top,				x	2,100			Snyder,		
Karthaus Forest.										
Blue Hill,			x		1,800	20 ft.	1914	Clearfield,		
Caledonia Pike,			x		1,800	35 ft.	1915	Clearfield,		
Beyer Camp,			x		1,900	30 ft.	1917	Clearfield,		
Flat Rock,			x		1,800	25 ft.	1913	Clearfield,		
Plantation,			x		1,750	25 ft.	1913	Clearfield,		
Ardell Farm,				x	2,000			Clearfield,		
Kettle Creek Forest.										
Eagle Knob,		x			2,100	30 ft.	1915	Clinton,	8	1
Trout Run,		x			2,000	50 ft.	1917	Clinton,		
Walters Run,			x		2,000	100 ft.	1913-14	Clinton,		
Schoonover,			x		2,000	35 ft.	1917	Clinton,		
Tamarack,				x	2,000			Clinton,		
Bell Branch,				x	2,100			Potter,		

Name.	Steel.	Wooden.	Tree.	Bare.	Elevation above sea.	Height of station above ground.	Constructed.	County.	Telephones. Miles State owned.	Telephones. Number telephones installed.
Kishacoquillas Forest.										
Thick Mountain,			x			40 ft.				
Treasters High Top,			x			30 ft.				
Spruce Mountain,			x			30 ft.				
Royal Ridge,			x			35 ft.				
Buck Ridge,			x			35 ft.				
Slate Ridge,			x			40 ft.				
Long Mountain,				x						
Lackawanna Forest.										
Knevil Hill,				x	2,200	15 ft.		Lackawanna,		
Pine Hill,				x	2,250			Lackawanna,		
Loyalsock Forest.										
Red Ridge,		x			2,000	36 ft.	1916	Lycoming,		
Red Ridge Point,			x		1,800	37 ft.	1914	Lycoming,		
Cove Mountain,			x (2)		1,800	38 ft.	1913	Lycoming,		
Canal Rock,			x		1,850	28 ft.	1913	Lycoming,		
Clessin Mountain,			x (2)		1,800	36 ft.	1917	Lycoming,		
Allegheny Ridge,			x (5)		1,900	35 ft.	1917	Lycoming,		
Jacoby Mountain,			x (2)		1,850	28 ft.	1913	Lycoming,		
Jacoby Mountain,			x (2)		1,800	36 ft.	1917	Lycoming,		
Lushbaugh Forest.										
Head of Bailey Run,				x	1,905			Cameron,		
McElhattan Forest.										
McElhattan,				x	1,806			Clinton,		
Nittany,				x	1,600			Clinton,		
Bixel Farm,				x	1,859			Clinton,		
Medix Forest.										
Rathburn Place,			x		2,340	30 ft.	1913	Elk,	15	8
Lincoln Farm,			x		2,104	40 ft.	1914	Elk,		
Minisink Forest.										
Mercer Tower,	x				1,290	40 ft.	1915	Pike,	12	3
Meadow Ridge Tower,		x			1,400	20 ft.	1916	Pike,		
Flat Ridge Tower,		x			1,450	35 ft.	1910	Pike,		
Perry Tower,		x			1,360	35 ft.	1913	Pike,		
Low Knob,				x	1,700			Pike,		
High Knob,				x	1,900			Pike,		
Mont Alto Forest.										
Pine Mountain,	x				1,620	50 ft.	1914	Franklin,	34	7
Rocky Mountain,	x				1,800	25 ft.	1913	Franklin,		
The Knob,		x			1,860	40 ft.	1912	Adams,		
White Rocks,		x			1,520	35 ft.	1914	Franklin,		

OBSERVATION STATIONS AND TELEPHONE LINES, DECEMBER 31, 1917—Continued.

Name.	Steel.	Wooden.	Tree.	Bare.	Elevation above sea.	Height of station above ground.	Constructed.	County.	Telephones. Miles State owned.	Telephones. Number telephones installed.
Chimney Rocks,				x	2,060			Franklin,		
Virginia Rocks,				x	1,820			Franklin,		
Cow Catcher,			x		1,680	28 ft.	1909	Franklin,		
Lonesome Pine,			x		1,950	40 ft.	1912	Franklin,		
Oak Knob Observatory,		x			1,450	30 ft.		Franklin,		
Ole Bull Forest.										
Cherry Springs,	x				2,499	60 ft.	1917	Potter,	43	8
Pine Hill,		x			2,260	20 ft.		Potter,		
Abbott Mountain,		x			2,300			Potter,		
Penfield Forest.										
Four Mile Hill,				x	1,700			Clearfield,	1½	2
Boones Mountain,				x	2,000			Clearfield,		
Penn Forest.										
Paddy Mountain,			x		1,980	25 ft.	1910	Centre,		
Big Poe Mountain,			x		2,040	25 ft.	1915	Centre,		
Crader's,				x	2,080			Centre,		
Sand Mountain,			x		1,940	25 ft.	1915	Centre,		
Pennypacker Forest.										
Hege Ridge,	x				1,440	56 ft.	1915	Perry,	4½	5
Rising Mountain,			x		2,140	55 ft.	1909	Perry,		
Sherman's Mountain,			x		2,150	45 ft.	1909	Perry,		
Bower Mountain,			x		2,050	25 ft.	1910	Perry,		
Rising Mountain No. 2,			x		2,300	33 ft.	1913	Franklin,		
Chimney Rock,				x	1,750			Perry,		
Pine Forest.										
Huntly Hill,		x			2,000	50 ft.	1914	Lycoming,	47	20
Rogers,				x	2,000	40 ft.	1916	Lycoming,		
Lebo,				x	2,000	35 ft.	1912	Lycoming,		

Pine Grove Forest.										
Devil's Half Acre,				x	1,500			Cumberland,		
Baer Mountain,				x	1,590			Adams,		
Pocono Forest and Surroundings.										
Whittaker,		x			1,300	40 ft.	1914	Pike,	17	7
Foresters,		x			1,250	40 ft.	1913	Monroe,		
Cresco,		x			1,150	30 ft.	1916	Monroe,		
Mt. Pocono,		x			1,825	25 ft.	1915	Monroe,		
Baily,		x			1,800	25 ft.		Monroe,		
Primrose,		x				25 ft.	1915	Monroe,		
Dancing Ridge,				x	1,250			Monroe,		
Negro Barren,				x	1,300			Monroe,		
Pocono Knob,				x	2,000			Monroe,		
Pimple Hill,				x	1,950			Monroe,		
Mosier Knob,				x	1,175			Monroe,		
Promised Land Forest.										
North Tower,		x			1,750	30 ft.	1913	Pike,		
South Tower,		x			1,800	28 ft.	1913	Pike,		
Rothrock Forest.										
Blue Ridge,		x				52 ft.	1913	Mifflin,		
Seven Mountain Forest.										
Bald Mountain,			x		2,280	35 ft.	1914	Centre,		
Treaster,			x		1,820	30 ft.	1913	Centre,		
Thickhead,			x		2,400	35 ft.	1915	Centre,		
Sinnemahoning Forest.										
Crune Lookout,		x			2,000	30 ft.	1914	Cameron,		
Panther Rock,				x	2,000			Cameron,		
Ridge Lookout,				x	2,160			Cameron,		
Sizerville Forest.										
Fox Mountain,		x			1,870	20 ft.	1916	Potter,	12	3
McNuff,		x			1,800	25 ft.	1916	Potter,		
Snow Shoe Forest.										
West Branch,		x			2,300	32 ft.	1914	Centre,		
Little Baer,		x			2,200	32 ft.	1914	Clinton,		
Stuart Forest.										
Bald Eagle,	x				2,907	50 ft.	1913	Westmoreland,	4.2	
Laurel Summit,				x	2,739					
Upper Beam Field,				x	2,702					
Berkey Hill,				x	2,294					
Pine Flat,				x	2,900					

OBSERVATION STATIONS AND TELEPHONE LINES, DECEMBER 31, 1917—Continued.

Name.	Steel.	Wooden.	Tree.	Bare.	Elevation above sea.	Height of station above ground.	Constructed.	County.	Telephones. Miles State owned.	Telephones. Number telephones installed.
Tea Springs Forest.										
Second Mountain,			x		1,800	20 ft.	1912	Centre,		
First Mountain,		x			1,700	30 ft.	1911	Clinton,		
White Deer Mountain,			x	x	1,700	20 ft.	1913	Union,		
The Knob,				x	2,000			Union,		
Rattle Snake Ridge,				x	1,600			Clinton,		
Hog Back,				x	1,800			Union,		
Sand Mountain,				x	1,200			Union,		
Westfall Forest.										
Buckhorn Ridge,				x	1,400			Pike,		
Whetham Forest.										
The Knob,		x		x	1,900	30 ft.	1910	Clinton,		
Ritchie Hill,					1,800			Clinton,		
Queens Run Lands.										
North Side Lookout,				x	1,850			Clinton,		
South Side Lookout,				x	1,900			Clinton,		
White Deer Forest.										
Sand Mountain,	x		x		2,070	60 ft.	1917	Union,		
Hough Mountain,			x		2,010	35 ft.	1916	Centre,		
Baker Oven,				x	1,893	25 ft.	1914	Union,		
Jones Mountain,				x	2,157			Union,		
Buffalo Mountain,				x	2,041			Union,		
Stony Point,				x	1,835			Union,		
Young Woman's Creek.										
Fork Hill,			x		1,800	30 ft.	1915	Clinton,	291.57	99
Totals,	9	33	92	82	82					

LEGISLATION.

At the legislative session of 1917, outside of the necessary appropriations for the continuance of forestry, no legislation was asked for by the Department. However, three separate bills were introduced by the friends of forestry, were passed finally, and became laws.

The first was an extension of the act of April 21, 1915, P. L. 156, by which the powers and duties of foresters and forest rangers were extended to the enforcement of the laws relating to fish and game. It provides, however, that all prosecutions for the violations of such laws shall be brought either by the Department of Fisheries or the Game Commission, as the case may be. All reports of such violations are first made to the Department of Forestry and by it communicated to the other respective officers. This law was approved May 29, 1917 and is cited as P. L. 309.

The second legislative act authorizes the Department to purchase and receive a conveyance of surface rights only, and to hold the same for forestry purposes as a portion of the State Forests. This law is intended to meet the case where land is subject to outstanding rights by means of which water, minerals, oil, gas, or other valuable deposits may have been previously conveyed. The policy of the Department heretofore consistently had been to purchase only fee simple titles It remains to be seen after being tested out by experience whether this law will produce the desired results. The question of a mixture or confusion of titles with respect to State Forests can only be satisfactorily reported upon after some years of trial have been applied to the project. Approved May 8, 1917 and cited as P. L. 156.

The third act of legislation was called for by the desire of the people to extend as far as possible the cultivation of all suitable land during the war emergency period and to accord to those who may live within or near State lands the privilege of cultivating small areas of State forest land. Leases for the purpose may be made by the Department for not more than ten years. In case application shall be made by more than one person, the right to lease will be advertised for public bidding. Where land is required by the Department for the use of its employes, it may be retained for the purpose regardless of a desire to lease on the part of third persons. The act was approved July 11, 1917 and is cited as P. L. 781.

NEW CONSTRUCTION AND REPAIRS.

Because of the high cost of labor and material, a minimum amount of new construction and repairs was undertaken. The following essential work was completed or authorized:

A dwelling for a forest ranger was built in the Sinnemahoning Forest. The difficulty of obtaining a suitable home in this region, where buildings of all kind are scarce, made it imperative that one of the rangers on this forest be accorded better housing. The new building places him in a locality where his services are most useful.

A new dwelling was erected for the forest ranger located near Potters Mills in Centre county. The old building had fallen into great disrepair and any attempt to repair the old building and make it serviceable would have cost nearly as much as the new structure. This building was authorized March 3, 1916 and is now completed

The forester's house at Austin needed a number of changes to make it suitable as a forester's home. The repairs undertaken consisted chiefly of re-arrangement of a portion of the house and general renovation. This building is now in the best of repair and presents an entirely satisfactory appearance. The work was authorized June 2, 1916 and finished that year.

At the forester's headquarters on the Medix Forest a stable was needed for the proper housing of a team and such forest property as could be conveniently stored therein. The building was authorized in April, 1917, and completed during the year.

It was necessary to select a site for a forester's home in the McClure Forest. No building at present on that forest is suitable for the purpose. The nearest available residence place, East Waterford, is too far away to be satisfactory as the headquarters of the forester, consequently a site was chosen in July, 1917, construction authorized but not yet undertaken. The building probably will not be begun until after the war. For the present the McClure Forest is attached to the Pennypacker Forest. Little more can be done than accord protection.

The dwelling occupied by Ranger Frank in Pike county was destroyed by fire on the 29th day of July, 1917. Since the presence of a ranger in that region is essential the reconstruction of the building on a somewhat different plan was authorized in October, 1917, and is now in process of completion.

The old stone house at the Forge on the Brumbaugh Forest was rapidly falling to decay. This house was so built and its character being so suitable for forest purposes, it was decided to make to it

extensive repairs, which were accordingly made during the summer of 1916. This property is now occupied by the forester in charge of the Brumbaugh Forest and is an attractive, useful dwelling.

LEGAL AFFAIRS.

The claim made by Silas W. Munn to a portion of the George Mead warrant in Girard township, Clearfield county, previously reported as having been referred to the Attorney General for action on July 8, 1915, still remains in his hands awaiting disposition.

The claim made by H. R. Hatfield in relation to the James Smith tract of 400 acres, 48 perches, in Bratton township, Mifflin county, was likewise referred to the Attorney General on July 1, 1915 and at present remains in his office.

On January 12, 1915, John H. Hoerner obtained a warrant to survey a tract of 30 acres of land in Metal township, Franklin county. He neglected to proceed with his claim and, without perfecting it, died January 24, 1914. The time limitation of seven years having elapsed, at the expiration of which such outstanding rights are vacated by reason of the rule of the Supreme Court laid down in Strauch vs. Shoemaker, 1 W & S 173, an application was made by the Commissioner of Forestry on January 31, 1912, acting for the Department of Forestry, for a warrant to survey the land formerly covered by the Hoerner application. On February 20, 1912, John H. Hoerner filed a caveat under this application, but did nothing thereunder up to the time of his death. A return of survey was made on the Hoerner warrant June 6, 1912.

Two questions arose in this case and came on for a hearing before the Board of Property. The first was whether a State officer acting for a department of the State government, might apply for a tract of vacant land for forestry purposes; and secondly, whether under the law a subsequent application might be made under the act of 1909. The hearing was held February 8, 1916, argument had, and briefs submitted. No decision was rendered for a long time and the Department of Forestry has never been officially notified of any decision whatever, although it is rumored that the matter was decided in behalf of the executor and devisee of the first applicant.

A claim has been made by the Midland Mining Company against the Commonwealth, involving certain tracts of land in Centre county, and arises by reason of alleged interfering surveys. The Attorney General's office, representing the Department of Forestry, chose

Harry Keller, Esq., of Bellefonte, to represent its interests. Elaborate maps have been prepared, statements of witnesses taken, and local history relating to the actual surveys procured in preparation for a final decision on the merits of the claim. This matter is not yet disposed of but is awaiting disposition in the courts of Centre county.

William Carter of Mount Union, R. D., after numerous warnings and total disregard thereof, was arrested for permitting his cattle to trespass upon State land where they were doing damage to a plantation. A hearing of the defendant was held on June 2, 1917 before Justice of the Peace David S. Black, of Huntingdon, where the Department was represented by the District Attorney of the county, C. D. Fetterhoff, Esq., and Forester A. W. Bodine. The defendant was convicted on the evidence submitted and was fined $15 and costs, which he paid, and has since properly restrained his cattle from trespassing on forbidden State property.

Legal Actions 1916, Arising Out of Protective Work.

Frank Lape, Joe Lape, Rollin George, Dr. F. P. Summa—Nanticoke, setting fire. Plead guilty. $10.00 costs and $25.00 damages to owner.

Sam Oliver—Smethport, R. F. D., setting fire. Settled by paying costs and $25.00 damage.

A. O. Albert—Setting fire. Settled by paying cost. Reprimanded in open court.

C. H. Eschenbach, Thornhurst—Refusing aid to fire warden. Justice of Peace dismissed case upon presentation of statements from physicians that defendant had rheumatism.

Legal Actions 1917, Arising Out of Protective Work.

George Whipple, W. Franklin—Setting fire. Grand Jury ignored bill.

Two Juveniles of Johnstown—Setting fire. Parents paid $16.46 costs after boys were sent to juvenile detention rooms at county jail.

George Hoffacker, E. Mauch Chunk—Setting fire. Grand Jury ignored bill.

Wilson Searfoss, Lehighton—Setting fire. Plead guilty. Fined $25.00 and paid costs of $31.05.

Spurgeon Nothstein, Vernon Schleir, Francis Arner, Lehighton—Setting fire. Plead guilty before Justice of Peace. Paid costs of $15.93 and cost of extinction, $21.97.

Pierce Ginder, Ashfield—Setting fire. Justice of Peace dismissed the case.

Three juveniles of Snow Shoe—Setting fire. Judge brought boys before him and reprimanded them. Costs on County.

Juvenile of Elizabethville—Setting fire. Judge paroled boy. Costs on county.

John Holt, Ohiopyle—Setting fire. Paid costs and $21.05 for extinction to Justice of Peace.

Herman McFern, Waynesboro—Setting fire. Sixty days in jail and costs.

Two Juveniles, Trucksville—Setting fire. Paroled by Judge.

Lehigh Valley Railroad Co., Wilkes-Barre—Setting fire. Judge dismissed case, "No negligence."

Frank Holden, Lucullus—Setting fire—Plead guilty. Sent to Huntingdon Reformatory and later to Danville Insane Hospital.

Lewis Venemen, Okome—Refusing to aid a forest fire warden. Settled before Justice of Peace by paying $22.46 costs to date.

Charles Bailey, Andreas—Hindering a forest fire warden. Grand Jury ignored bill.

George Sackalosky, Nuremberg—Setting fire. Convicted. Fined $100.00 which was later reduced to $10.00 and costs.

Allen Bittner, Glencoe—Refusing to aid forest fire warden. Paid fine of $5.00 to Justice of Peace, and costs of $5.64.

Jesse Pletcher, Tockwood—Setting fire. Justice of Peace dismissed case.

Harry Roadman, Stahlstown—Setting fire. Justice of Peace collected cost of extinction of fire.

Kuhns family, Laughlintown—Setting fire. One member arrested by State Police but nothing proved.

James Lute, New Florence, R. F. D.—Refusing to aid warden. Justice of Peace dismissed case because warden did not have a witness to refusal.

There was collected and turned into the State Treasury, $2,185.00, for fire extinction from parties responsible. $442.53, was collected and paid to wardens. The State Treasury received from the Bureau of Forest Protection, $2,295.55. The total amount saved to the Commonwealth on account of bills for fire extinction was $2,891.54.

TEMPORARY CAMPING PERMITS.

The following table shows the number of temporary camping permits issued during the years covered by this report, together with the number of persons granted permits:

	Number of Permits Issued.	Number of Persons to Whom Permits Were Issued.
1916.	523	2,696
1917.	384	1,989

During both of the above years, 64 permits were granted to persons for professional and protective purposes.

Permits No. 52 and 101, in 1917, were issued to the following Troops, Boy Scouts of America:

No. 52, Troop 4, Harrisburg, to camp at Pine Grove Furnace.
No. 101, Troop 2, Carlisle, to camp at Pine Grove Furnace.

It will be noted that the number of permits as well as the number of campers materially decreased during 1917. This is no doubt attributable to our entry into the war and the generally disarranged economic conditions consequent thereon.

PERMANENT CAMP LEASES.

23. Thomas George, Yukon, Pa.,	Mossy Spring, Benezette township, Elk county.	$5 00
27. Walter S. Wilcox, Lewisburg, Pa.,	Old Gap Camp, West Buffalo township, Union county.	5 00
44. Mandus Nelson, DuBois, Pa.,	Harringer Place, Pine township, Clearfield county.	5 00
52. Samuel C. Boop, Glen Iron, Pa.,	Mull's Improvement, Spring township, Snyder county.	5 00
53. J. C. Coder, Huntingdon, Pa.,	White Oak Flat, Cass township, Huntingdon county.	5 00
55. F. I. Sassaman, Troxelville, Pa.,	Gold Spring, Adams township, Snyder county.	5 00
60. Robert E. DeLisle, Altoona, Pa., R. D. No. 1.	Poe Mills Camp, Haines township, Centre county.	6 00
72. F. S. Rice, Fayetteville, R. D. No. 1,	Poplar Hollow Camp, Green township, Franklin county.	6 00
97. Arthur L. Seeley, Reynoldsville, Pa.,	Loboard Camp, Gibson township, Cameron county.	5 00
100. T. Foster Thomas, 1328 Arch St., Philadelphia, Pa.	Mud Pond, Porter township, Pike county,	8 00
101. John D. Zellner, Slatington, Pa.,	Peck's Mill, Porter township, Pike county,	8 00
113. Floyd C. Wirth, Millmont, Pa., R. D. No. 1.	Boney Shanty, Hartley township, Union county.	5 00
146. Chas. V. Overfield, Stroudsburg, Pa. R. D.	Peck's Dam, Porter township, Pike county,	8 00
161. O. L. Coleman, 5 Lakeside Ave., Du Bois, Pa.	Head of White Oak Draft, Gibson township, Cameron county.	5 00
165. O. L. Bailey, Sinnemahoning, Pa.,	Divide of Cook's and Moutour's Runs, Grove township, Cameron county.	5 00
167. Geo. A. Sherman, Waverly, Pa.,	White Deer Lake, Blooming Grove township, Pike county.	8 00
174. A. R. Thompson, McGees Mills, R. D. No. 2.	Big Spring, Gibson township, Cameron county.	5 00
190. John A. Boggs, Alexandria, Pa.,	Indian Point, Logan township, Huntingdon county.	6 00
198. J. A. Steiner, Sunbury, Pa.,[1]	Boney Shanty Camp, Spring township, Snyder county.	5 00
198. W. E. Stahlnecker, Beaver Springs, Pa.	Blazer Gap, Adams township, Snyder county.	6 00
202. A. G. Brown, Lewisburg, Pa.,	Stony Gap, West Buffalo township, Union county.	5 00
207. E. Lee Kohler, Gaines, Pa.,	Hamilton Camp, Chapman township, Clinton county.	5 00
217. J. Henry Bartram, Lansdowne, Pa.,	Doudy Mills, Miles township, Centre county.	5 00
222. J. C. Beach, Sabinsville, Pa.,	Steinhart Spring, Stewardson township, Potter county.	5 00
225. Albert Miller, 719 Railroad Ave., Sunbury, Pa.	Parker Road Camp, Cummings township, Lycoming county.	5 00
247. Grant O. Deeter, 352 Chestnut St., St. Marys, Pa.	Shingle Branch Camp, Chapman township, Clinton county.	6 00
255. R. R. Palmer, 903 5th Ave., Juniata, Pa.	Mouth of Panther Creek, Armagh township, Mifflin county.	6 00

[1]Withdrawn March 23, 1917.

258. V. H. Mauger, Bangor, Pa.,	Porter township, Pike county,	8 00
259. G. W. Rossman, Penna. Furnace, Pa.,	Shall's Gap, Ferguson township, Centre county.	6 00
261. G. A. Crooks, Ceres, New York,	Jordan Camp, Stewardson township, Potter county.	5 00
262. C. F. Lins, Lewistown, Pa.,	Twin Spring, Bratton township, Mifflin county.	6 00
263. A. C. Reed, Desire, Pa.,	Huckleberry Spring, Pine township, Clearfield county.	6 00
264. H. Somers Fischer, Hyndman, Pa.,	Seaboldt Run Camp, West township, Huntingdon county.	6 00
265. Nevin Love, Mount Union, R. D. No. 1.	Bell's Furnace, Shirley township, Huntingdon county.	1 00
266. E. W. Lamb, Belfast, Pa.,	Mud Pond, Porter township, Pike county,	8 00
267. Larry Houtz, Charter Oak, Pa.,	Houtz Spring, Jackson township, Huntingdon county.	6 00
268. W. C. Witmer, Bellefonte, Pa.,	Bear Meadows Run, Harris township, Centre county.	6 00
269. Joseph Cadman, Fredericktown, Box 43.	Cadman Camp, Harris township, Centre county.	6 00
270. S. E. Moist, Lewistown, R. D. No. 2,[1]	Sand Spring, Bratton township, Mifflin county.	6 00
270. Frank Sweitzer, 1065 W. 20th St., Tyrone, Pa.	Hicks Spring, Logan township, Huntingdon county.	6 00
271. H. R. Wilson, Rockton, Pa.,	Tar Kiln Spring, Pine township, Clearfield county.	6 00
272. George White, Olyphant, Pa.,	Pole Bridge Camp, Lackawaxen township, Pike county.	8 00
273. Chas. E. Grier, 610 4th St., DuBois, Pa.	Hickory Camp, Benezette township, Elk county.	5 00
275. Miss M. B. Hench, 11 N. Hanover St., Carlisle, Pa.	Pine Grove, Cooke township, Cumberland county.	10 00
277. I. B. Schoaf, Donora, Pa.,	Shawley Spring, Benezette township, Elk county.	5 00
278. W. K. Bastian, 151 W. 4th St., Williamsport, Pa.	Love Run, Cummings township, Lycoming county.	6 00
279. Geo. Winterstein, Scranton, Pa.,	Peck's Dam, Porter township, Pike county,	8 00
280. Walter Sutch, North Bend, Pa.,	Water Plug, Chapman township, Clinton county.	5 00
281. W. A. Lantz, Shelocta, Pa.,	Ripper Spring, Benezette township, Elk county.	5 00
282. C. C. Rowan, Punxsutawney, Pa.,	Rippeer Spring, Benezette township, Elk county.	5 00
283. Cleo H. Schenck, Clearfield, Pa.,	Pearsall Camp, Huston township, Clearfield county.	6 00
284. Bruce Hurlinger, North Bend, Pa.,[2]	Upper Stout Hollow, Chapman township, Clinton county.	5 00
284. F. A. Mosebach, 39 W. Fairview St., Bethlehem, Pa.	Peck's Pond, Blooming Grove township, Pike county.	8 00
285. James W. Murray, 226 Walnut Ave., Altoona, Pa.	Hickory Bottom, Logan township, Huntingdon county.	6 00
286. H. O. Sheasley, Petersburg, Pa.,	Sheasley Camp, Logan township, Huntingdon county.	6 00
287. Dr. John A. Boyd, 25 Wabash Ave., Pittsburgh, Pa.	Road Run Camp, Abbott township, Potter county.	5 00
289. H. B. Lightner, Sinnemahoning, Pa.,	Watering Trough Spring, Grove township, Cameron county.	5 00
290. Walter Scott, 7919 Susquehanna St., Pittsburgh, Pa.	Saw Dust Pile, Grove township, Cameron county.	5 00
291. Lowell P. Thomas, Salladasburg, Pa.,	Cummings Spring, Cummings township, Lycoming county.	5 00
292. C. C. Strumfels, Bristol, Pa.,	Wells Spring, Porter township, Pike county.	8 00
293. A. D. Shoop, 611 Forrest St., Harrisburg, Pa.	Cocoanut Spring, West township, Huntingdon county.	6 00
294. J. H. Winters, 1609 11th Ave., Altoona, Pa.	Floyd & Hale Tract, Jackson township, Huntingdon county.	6 00
295. H. O. Barger, Woodland, Pa.,	Stillhouse Hollow, Goshen township, Clearfield county.	5 00
296. W. H. Watson, Carversville, Pa.,	Peck's Mill, Porter township, Pike county,	8 00
297. Ray J. Jordan, Box 101, Betula, Pa.,	Bell Spring, Gibson township, Cameron county.	5 00
298. Mike Parker, Sterling Run, Pa.,	Parker Camp, Benezette township, Elk county.	5 00
299. A. G. Frankenberry, Ryde, Pa.,	Wilson Spring, Shirley township, Huntingdon county.	6 00
300. Warren Lee, East Stroudsburg, Pa.,	Big Swamp, Porter township, Pike county,	8 00
301. R. A. Hassinger, Beavertown, Pa.,	Boney's Hole, West Beaver township, Snyder county.	5 00
302. W. J. Cobb, 835 Quincy Ave., Scranton, Pa.	Cobb's Camp, Dingman township, Pike county.	8 00
303. Albert Bradford, Milroy, Pa., R. D. No. 4,[3]	Cold Spring, Armagh township, Mifflin county.	6 00
303. Stewardson Twp. School District, Cross Fork, Pa.	Clark Camp, Stewardson township, Potter county.	1 00
304. B. P. Steele, McVeytown, Pa.,	Black Gap, Armagh township, Mifflin county.	5 00

[1]Vacated June 28, 1916.
[2]Revoked September 7, 1917.
[3]Revoked December 7, 1917.

305. W. R. Bachman, Yeagertown, Pa., --	Buckwheat Shanty, Armagh township, Mifflin county.	6 00
306. J. LeRoy Kane, Biglerville, Pa., ------	Miltenburger Camp, Franklin township, Adams county.	6 00
307. Charles Johns, Galeton, Pa., R. D. No. 1.	Clark's Shanty, Brown township, Lycoming county.	5 00
308. J. B. Gleason, Gleasonton, Pa., ------	Mouth of Lorilly Forks Creek, Chapman township, Clinton county.	5 00
309. B. J. Collins, Driftwood, Pa., --------	White Oak Draft, Gibson township, Cameron county.	5 00
310. Orvis M. Fetzer, Snow Shoe, Pa. -----	Panther Branch, Beech Creek township, Clinton county.	5 00
311. Clair Weyer, Spruce Creek, Pa., ------	Minemyer Gap, Spruce Creek township, Huntingdon county.	6 00
312. J. E. Berninger, Catawissa, Pa., R. D. No. 5.	Junction Camp, Penn township, Centre county.	5 00
313. B. F. Frances, Jersey Shore, Pa., ----	Boyer Spring, McHenry township, Lycoming county.	5 00
314. John F. Watts, Salladasburg, Pa., --	Baldwin Camp, Cummings township, Lycoming county.	5 00
315. O. B. Bruner, Lock Haven, Pa., ----	Head of Smith Run, Noyes township, Clinton county.	5 00
316. Alfred Grafflus, Box 1, Woodland, Pa.	Lucas Spring, Girard township, Clearfield county.	5 00
317. John A. Fye, Moshannon, Pa., -------	Head of Wolfe Run, Burnside township, Centre county.	5 00
318. Clyde D. McAlevy, Barree, Pa., ------	Mill Camp, Logan township, Huntingdon county.	6 00
319. Miss M. M. Fox, Radnor, Pa., -------	Rattle Snake Island, Porter township, Pike county.	8 00
320. Harry C. Shutt, 139 S. Chestnut St., Mt. Carmel, Pa.[1]	Bull Run Camp, Chapman township, Clinton county.	5 00
320. G. F. Derrick, Clearfield, Pa., --------	Bailey Camp, Pine township, Clearfield county.	6 00
321. Robert B. Vale, care North American, Philadelphia, Pa.	Fuller Site, Pine Grove forest, Cooke township, Cumberland county.	12 00
322. C. B. Peters, 697 W. Franklin St., Slatington, Pa.	Little Mud Pond, Porter township, Pike county.	8 00
323. Grant Gresser, Chatham Run, Pa., ---	Mouth of Robbins Run, Gallagher township, Clinton county.	5 00
324. Laubenstein, W. J., 102 Foster Ave., State College, Pa.	Whippel Dam, Jackson township, Huntingdon county.	5 00
325. O. L. Stevens, Pioneer House, State College, Pa.	Owl Gap, Jackson township, Huntingdon county.	6 00
326. Preston E. Howe, Lewistown, Pa., --	Spectacle Gap, Milford township, Juniata county.	6 00
327. W. F. Lucas, Huntingdon, Pa., ------	Old Frew Homestead, Miller township, Huntingdon county.	6 00
328. Dr. Leon R. Felt, Emporium, Pa., ---	South line of warrant 4629, Portage township, Cameron county.	5 00
329. Fred Lanterman, Kaylor, Pa., Box 2,	Williams Camp, Pine township, Clearfield county.	5 00
330. Ross McClenahan, Reedsville, Pa., ----	Reeds Gap, Armagh township, Mifflin county.	6 00
331. R. Pike, Woodland, Pa., ----------	Ames Camp, Girard township, Clearfield county.	5 00
332. Geo. S. Teeter, Hawley, Pa., ---------	Tar Kiln Creek, Blooming Grove township, Pike county.	8 00
333. J. C. Smith, Bangor, Pa., ----------	Peck's Dam, Porter township, Pike county,	8 00
334. G. C. Reeder, Renovo, Pa., ----------	Forester's Spring, Chapman township, Clinton county.	5 00
335. F. B. Yocum, Mapleton Depot, Pa.,[2]	White Oak Flat, Cass township, Huntingdon county.	5 00
335. Wm. C. Yeatts, Bendersville, Pa., ----	Hinkle Place, Cooke township, Cumberland county.	8 00
336. F. E. Barry, York, Pa., ----------	Wenk House, Cooke township, Cumberland county.	15 00
337. S. S. Farver, Elizabethtown, Pa.,[3] --	Rupp Place, Cooke township, Cumberland county.	20 00
337. A. M. Bennett, Ebensburg, Pa., ------	Head Upper Jerry Run, Grove township, Cameron county.	5 00
338. W. H. Kepner, Newport, Pa., --------	Old Water Mill, Armagh township, Mifflin county.	6 00
339. J. R. Ardary, Curwensville, Pa., -----	Stone Run Camp, Pine township, Clearfield county.	6 00
340. Argie S. Hilty, Apollo, Pa., Box 883,	Barabers Old Camp, Gibson township, Cameron county.	5 00
341. Warren E. Desh, South Bethlehem, Pa.	Peck's Mill, Porter township, Pike county,	8 00
342. Jacob F. Staley, South Mountain, Pa.	Rocky Mountain Camp, Quincy township, Franklin county.	7 00
343. John Raymer, 336 Oak St., Jersey Shore, Pa.	County Line Camp, Chapman township, Clinton county.	5 00
344. H. G. Croushore, Carnegie, Pa., -----	Pine Spring, Armagh township, Mifflin county.	6 00
345. Leslie E. Baker, Milton, Pa., --------	Yankee Run Camp, Miles township, Centre county.	5 00

[1]Withdrawn September 28, 1917.
[2]Revoked January 4, 1918.
[3]Withdrawn February 14, 1917.

346. P. B. Eisenman, Brookville, Pa., ----	Head of McNearney Run, Girard township, Clearfield county.	5 00
347. Toboyne Twp. School Dist., New Germantown, Pa.	Huston Run, Toboyne township, Perry county.	1 00
348. W. V. McLean, Rimersburg, Pa., ----	Pine Camp, Gibson township, Cameron county.	5 00
349. Charles Waldron, Muncy, Pa., -------	Manor Fork, Brown township, Lycoming county.	5 00
350. H. P. Custard, East Stroudsburg, Pa.	East Spring Run, Porter township, Pike county.	8 00
351. Samuel Noble, Fannettsburg, Pa., ----	Cowan's Gap, Todd township, Fulton county.	6 00
352. P. F. Dieffenderfer, Mifflinburg, Pa.,	Long Place, Miles township, Centre county.	6 00
353. J. B. Hartman, Boyertown, Pa., -----	Stover Gap Spring, Miles township, Centre county.	6 00
354. L. E. Scherer, Jersey Shore, Pa., ----	Griffith Camp, McHenry township, Lycoming county.	5 00
355. W. R. Fargo, Clearfield Pa.,[1] --------	Three Oaks, Pine township, Clearfield county.	6 00
355. J. I. Reed, Pine Grove Mills, Pa., ----	Reed Camp, Barree township, Huntingdon county.	5 00
356. H. S. Fish, Sayre, Pa., ----------	Boyer Mill, Brown township, Lycoming county.	5 00
357. James W. Bittner, Lock Haven, Pa.,--	Tin Shanty, Grugan township, Clinton county.	6 00
358. John Fuller, Milford, Pa., ----------	Little Mud Pond, Porter township, Pike county.	8 00
359. Penna. R. R. Co., Williamsport, Pa.,	Site near Whetham, Grugan township, Clinton county.	8 00
360. J. Elder Bryan, New Castle, Pa., ----	Pray Spring, Beech Creek township, Clinton county.	5 00
361. D. R. Schall, Orwigsburg, Pa., -------	Cottage Camp, Curtin township, Centre county.	5 00
362. R. O. Dunkle, Dry Run, Pa., --------	Cowans Gap, Tod township, Fulton county.	6 00
363. A. E. Welker, Woodland, Pa., -------	Mouth of Deserter Run, Girard township, Clearfield county.	5 00
364. Parry D. Wilson, Wilkinsburg, Pa., --	Bailey Old Camp, Gibson township, Cameron county.	5 00
365. Maynard Meeker, Centre Hall, Pa., --	Pole Bridge, Potter township, Centre county.	5 00
366. James Nichols, Avis, Pa., ----------	Lynch Gap, Cummings township, Lycoming county.	5 00
367. Ira D. Slagle, State College, Pa., ----	Mouth Owl Gap Run, Jackson township, Huntingdon county.	6 00
368. E. E. Kopenhaver, Millersburg, Pa.,	Cherry Run Gap, Haines township, Centre county.	6 00
369. Frank Gaff, Mount Union, Pa., -------	Pine Grove Camp, Shirley township, Huntingdon county.	6 00
370. O. H. Wentzel, Blain, Pa., ----------	Sheriff Camp, Jackson township, Perry county.	6 00
371. George H. High, Orviston, Pa., ------	Italian Shanty, Beech Creeek township, Clinton county.	5 00
372. George H. Houck, Philipsburg, Pa.,--	M. B. Fording Camp, Beech Creek township, Clinton county.	5 00
373. B. B. Gearhart, West Decatur, Pa.,--	Berkey Camp, Pine township, Clearfield county.	6 00
374. D. R. Cadwallader, 26 S. 13th St., Harrisburg, Pa.	Sand Knob, Jackson township, Huntingdon county.	6 00
375. W. F. Delaney, Throop, Pa.,[2] --------	Peck's Mill, Porter township, Pike county,	8 00
375. F. J. Crediford, Waterville, Pa., -----	Mouth of Dam Run, Cummings township, Lycoming county.	5 00
376. A. L. Jones, Matamoras, Pa., --------	Steam Mill Brook, Lackawaxen township, Pike county.	8 00
377. G. G. Wakenhut, 246 William St., Williamsport, Pa.	Wendall Shanty, Brown township, Lycoming county.	6 00
378. Martin M. Hibbs, Morrisville, Pa., ----	Turner Swamp, Porter township, Pike county.	8 00
379. H. E. Chamberlin, Altoona, Pa., -----	Apple Tree Spring, West township, Huntingdon county.	6 00
380. G. E. Steinmark, Lyndora, Pa., ------	Big Chestnut Camp, Girard township, Clearfield county.	5 00
381. S. A. Beehler, Greentown, Pa., -------	Beehler Camp, Green township, Pike county.	8 00
382. L. Wilbur Houser, Milroy, Pa.,[3] -----	Muthersbaugh Camp, Armagh township, Mifflin county.	6 00
383. Dr. W. S. Hunter, Reedsville, Pa., ---	Bide-a-wee Camp, Armagh township, Mifflin county.	5 00
384. S. L. Ross, 312 Reed Ave., Monessen, Pa.	Crawford Camp, Gallagher township, Clinton county.	5 00
385. Herman W. Bartschat, 334 E. Broad St., Nanticoke, Pa.	Bull Hollow Camp, Spring township, Snyder county.	6 00
386. F. M. Stahlman, 146 Western Ave., Brookville, Pa.	Crossroads Camp, Girard township, Clearfield county.	5 00
387. F. E. Leck, Brockport, Pa., ----------	Twin Pines, Benezette township, Elk county.	5 00

[1]Withdrawn March 14, 1918.
[2]Revoked Seeptember 7, 1917.
[3]Withdrawn January 12, 1918.

388. Park R. Homan, State College, Pa.,	Bear Gap Camp, Jackson township, Huntingdion county.	5 00
389. W. M. Lynch, Clarks Summit, Pa.,	Peck's Pond, Blooming Grove township, Pike county.	8 00
390. G. J. Koller, Renovo, Pa.,[1]	Stone Corner, Beech Creek township, Clinton county.	5 00
390. J. Clyde Collins, Driftwood, Pa.,	Head Lick Island Run, Gibson township, Cameron county.	5 00
391. R. J. McAlister, Jersey Shore, Pa.,	Dark Hollow, Grugan township, Clinton county.	6 00
392. J. E. Faker, Muncy, Pa.,	Long Run Camp, McIntyre township, Lycoming county.	5 00
393. Clarence Reedy, White Deer, Pa.,	Italian Camp, White Deer township, Union county.	5 00
394. D. J. Branning, Hawley, Pa.,	Tar Kiln Brook, Blooming Grove township, Pike county.	8 00
395. E. M. Walters, 452 Reynolds St., Williamsport, Pa.	Apker Spring, Lewis township, Lycoming county.	5 00
396. R. C. Bobb, 503 N. West St., Carlisle, Pa.	Bunker Hill Farm, Cooke township, Cumberland county.	8 00
397. Levi Conner, Glen Campbell, Pa.,	Gum Spring, West Keating township, Clinton county.	5 00
398. J. R. Penington, Lewistown, Pa.,	Camp Penington, Armagh township, Mifflin county.	6 00
399. J. R. Sechrist, Burnham, Pa.,	Camp Sechrist, Armagh township, Mifflin county.	6 00
401. J. H. Mayer, 109 Middle St., Waynesboro, Pa.	McDowell Run Camp, Hamiltonban township, Adams county.	6 00
402. M. M. Harshberger, Mattawana, Pa.,	Camp Soyoc Bratton township, Mifflin county.	6 00

[1]Withdrawn December 8, 1917.

Lease awarded before December 31, 1917, but not drawn for execution on that date:

Edmund C. Wingerd, Chambersburg, Pa.,	Public Comfort, Quincy township, Franklin county.	$6 00

Permanent camp leases are awarded under the Act of March 27, 1913, P. L. 12.

Camp sites granted to December 31, 1917, ..	531
Cancelled, ...	41
Withdrawn, ...	38
Not yet executed, ...	1
Camp leases now in force, ...	400

LAND GRANT APPLICATIONS.

No.	Character of Land.	Acres.	Perches.	Township.	County.	Applicant.	Application Received.	Action of Forestry Com.
87	Unimproved vacant,	67	78	Summerhill,	Cambria,	Wm. H. Hughes,	June 19, 1916,	Declined.
88	Unimproved vacant,	15.22		Stewart,	Fayette,	John P. Verner,	June 9, 1916,	Declined.
89	Unimproved vacant,	24	138	Todd,	Fulton,	Francis M. Taylor,	Oct. 4, 1916,	Declined.
90	Unimproved vacant,	2.139		Saltlick,	Fayette,	C. E. B. Dumbauld,	May 24, 1917,	Declined.
91	Unimproved vacant,	5.979		Saltlick,	Fayette,	C. E. B. Dumbauld,	May 24, 1917,	Declined.
92	Vacant island,	8		Wilmot,	Bradford,	Earl Gamble,	July 23, 1917,	Declined.
93	Unimproved vacant,	2		W. Providence,	Bedford,	John H. Heffner,	Aug. 21, 1917,	Declined.
94	Unimproved vacant,	4		Mt. Pleasant,	Westmoreland,	St. Vincent Archabbey, per C. Lindner, Procurator.	July 13, 1917,	Declined.
95	Unimproved vacant,	108	25	Blooming Grove,	Pike,	F. L. Westbrook,	June 21, 1917,	Accepted.
96	Unimproved vacant,	95		Jefferson,	Washington,	Chas. M. Hull,	Nov. 8, 1917,	Declined.

DEPARTMENT LEASES AND CONTRACTS.

Federal Refractories Co. (No. 15)

During the years 1916 and 1917 the following revenues were received for the removal of ganister rock. Lease is dated December 18, 1903, and runs for 20 years:

1916.	
January,	$96.36
February,	107.78
March,	74.84
April,	86.72
May,	76.11
June,	58.18
July,	76.16
August,	91.73
September,	91.77
October,	83.37
November,	62.13
December,	53.45
Total for the year,	$958.60

1917.	
January,	$65.85
February,	73.40
March,	88.44
April,	90.14
May,	79.83
June,	107.72
July,	116.88
August,	132.99
September,	113.73
October,	94 46
November,	105.53
December,	83.69
Total for the year,	$1,152.66
Total for two years,	2,111.26

The value to the Commonwealth of this lease is shown as of December 31, 1917, by the following statement of account:

To purchase price of land, 1087 acres, 69 perches, at $2.75 per acre,		$2,990.44
Interest to above date,		952.60
Fixed charges for road and school purposes to above date,		614.92
Total,		$4,557.96
Royalties received previously reported,	$10,091.36	
Royalties received during the years 1916-17,	2,111.26	
Total receipts to December 31, 1917,		12,202.62
Total expenditures and charges to Dec. 31, 1917,		4,557.96
Excess of receipts over expenditures,		$7,644.66

The above statement shows that the Commonwealth has received from this lease an excess of $7,644.66 over all its expenditures, which is equivalent to a return of 267.22 per cent. on the investment to December 31, 1917.

Federal Refractories Co. Lease No. 2. (No. 61)

This lease is dated December 22, 1909 and covers 542 acres in Logan and West townships, Huntingdon county. By the terms of the lease the removal of rock was to begin within 18 months of the date of the lease. For various reasons removals were delayed and the Department extended the period from time to time to December 14, 1916. Up to this time this lease had yielded no returns. On the 12th of December, 1916, a supplemental agreement was entered into whereby the lessee, in order to continue its lease, agrees to pay in quarterly installments a royalty of 5½c a ton on a minimum quantity of 7500 tons, whether the same shall have been actually removed or not; but when actual removal begins the minimum quantity on which royalty shall be paid is doubled.

During the period of this report the lessee, in accordance with the foregoing, has paid the following amounts:

March 15, 1917,	$103.12
June 15, 1917,	103.12
September 15, 1917,	103.13
December 15, 1917,	103.13
Total,	$412.50

SHIPPENSBURG BOROUGH WATER LEASE. (No. 246).

Under the foregoing lease, dated January 13, 1915, a supply of water from the State land for borough purposes is obtained. The borough of Shippensburg has paid the following royalties:
Amount due the Department of Forestry:

One-fourth of one per cent. for 1916,	$28.75
One-fourth of one per cent. for 1917,	29.61
Total,	$58.36

MONT ALTO BOROUGH WATER LEASE. (No. 161).

An agreement dated June 18, 1914, with this borough permits it to draw water from a spring known as "The Pearl of the Park," in the State Forest, for use for borough purposes. The pipe line is now complete and water is being used, but to date the borough has not made any payment of royalties to the Department. These when paid will be reported later.

SOUTH RENOVO WATER LEASE. (No. 33).

Under lease dated August 28, 1906, the borough of South Renovo for the year 1916, in accordance with the terms of the contract, paid $16.13, and for the year 1917 it paid $17.30.

Total for the period, ... $33.43

CHAMBERSBURG WATER LEASE. (No. 76).

Royalties from this lease, which is dated November 7, 1910, are at the rate of one-half of one per cent of the gross receipts.

For the year 1916 this charge amounted to	$143.20
For the year 1917 this charge amounted to	151.27
Total receipts received from the above lease,	$294.47

THE THOMAS CRONIN COMPANY. (No. 98).

This lease, dated March 25, 1912, was to run 15 years and to carry a royalty of 16c per ton for blue stone from a quarry on the Stuart State Forest near Ligonier, Westmoreland county. At the request of the Thomas Cronin Co., and by action of the Forestry Commission, on June 2, 1916, the contract was cancelled, and, in full settlement thereof, the Cronin Company, on October 6, 1916, paid in cash, $705.76.

Revenues for 1916.

January, 31.25 tons at 16c per ton,	$5.00
February and March, nothing.	
April, 781.384 tons at 16c per ton,	125.02
May and June to and including the 12th, 137.14 tons at 16c per ton,	21.94
Total,	$151.96
In full settlement and cancellation of the lease,	705.76
Total revenues for the year 1916,	$857.72
Total revenues to date from this lease,	$2,440.36
The Stuart Forest located in Westmoreland and Somerset counties, containing an area of 8532 acres, cost the commonwealth for purchase money,	$42,662.81
Interest thereon at 2 per cent from purchase to December 31, 1917,	7,679.30
Salaries of foresters and rangers to December 31, 1917, including amount expended for labor, development and maintenance,	21,994.76
Fixed charges for road and school purposes,	3,000.88
Total cost of the Stuart Forest to December 31, 1917,	$75,337.75

The foregoing lease, therefore, to date of cancellation, produced a net return of 3.23 per cent. on the total investment.

THE COLUMBIA FLINT COMPANY. (No. 254).

This lease, dated September 17, 1915, for the removal of flint rock from the Pine Grove State Forest in Cooke township, Cumberland county, and Menallen township, Adams county, carries a royalty of 12½c per ton. Revenues received are as follows:

1916.

January,	$31.16
February,	13.51
March,	14.38
April,	11.29
May,	23.51
June,	42.81
July,	34.42
August,	43.82

September,	30.12
October,	18.68
November,	14.61
December,	10.45
Total,	$288.76

1917.

January,	$1.25
February and March,	.....
April,	10.08
May,	2.44
June,	4.50
July to December,	.....
Total,	$18.27
Total for two years,	$307.03

Revenues previously reported,	$78.06
Total revenues to date,	$385.09

THE SANDUSKY PORTLAND CEMENT CO. (No. 101).

This company pays a royalty of 25c per ton of 2,000 pounds railroad weight, or a fixed minimum royalty of $600.00 per year. The lease was in existence when the Department purchased the Pine Grove Forest, and by extension granted by the Department, now runs to June 1, 1922, or so long in the interim as a suitable supply of clay may be obtained.

Revenues for 1916.

January,	$88.89
February,	73.10
March,	23.34
April,	137.49
May,	263.81
June,	99.05
July,	181.77
August,	158.83
September,	166.51
October,	176.90
November,	188.00
December,	53.07
Total,	$1,610.76

Revenues for 1917.

January,	$131.39
February,	120.04
March,	125.55
April,	184.01
May,	147.05
June,	141.77
July,	137.24
August,	140.69
September,	105.34
October,	191.51
November,	49.68
December,	72 22
Total,	$1,546.49
Total for two years,	$3,157.25

Total revenues previously reported,	$2,803.98
Total revenues to date,	$5,961.23

THE UNITED ICE AND COAL COMPANY. (No. 148).

The ice house at Laurel Dam in the Pine Grove Forest having been destroyed by fire and not yet rebuilt, this company under its lease is paying the minimum rental of $250.00 per year reserved and will continue to do so until the building is restored or the lease expires. Receipts during the period of this report are as follows:

1916,	$250.00
1917,	250.00
Total,	$500.00
Total receipts to date,	$1,418.76

E. L. LOVE FLAGSTONE LEASE. (No. 167).

This lease dated December 14, 1914, is for the removal of flagstone from State land in Cummings township, Lycoming county, for a period of ten years. Royalty is based upon lineal foot or square foot of stone removed, according to kind. To date revenues received are as follows:

April 13, 1917,	$31.50

SPRUCE CREEK BALLAST LEASE. (No. 263).

On October 11, 1915, this lease was awarded to A. A. Stevens, of Tyrone, Blair county, and carried the right to remove certain rock suitable for stone ballast, on a tract of State land at Spruce Creek.

Mr. Stevens never began operations under the lease, and in accordance with the power vested in the Department, reserved by the lease, the State Forestry Reservation Commission at a meeting held on May 4, 1917, declared the lease lapsed, and resumed full possession and control of the leased tract. Mr. Stevens having died in the meantime (January, 1917), notice to this effect was served upon representatives of his estate. This contract is therefore terminated.

NEW YORK CENTRAL RAILROAD COMPANY. (No. 283).

Under the mineral leasing provision of the Department act a lease was made to the New York Central Railroad Company bearing date March 2, 1917, by which that company is granted the right to remove stone for ballast purposes from warrants 4,380 and 4,381 in Morris township, Tioga county, a portion of the Blackwells State Forest. Stone to the quantity of 20,000 cubic yards may be taken, extending over a period of five years from the date of the lease. The grantee covenants to pay 5c per cubic yard for all stone removed. The exercise of the privilege conferred by the lease is subject to the usual restrictions regarding fire, destruction of timber, and careful operation, with a right of defeasance in the grantor. Revenue from this lease to date shows a return of $13.95.

THE BESSEMER LOAM-SAND CO. (No. 295).

A lease dated November 30, 1917, was made with this corporation under the provisions of the Department of Forestry act, permitting the lessee to remove ganister rock from a portion of the John Bollander, Thomas Bar, James Bar, Mary Bar, and Mary Links warrants in Armagh township, Mifflin county, and Haines township, Centre county. This lease is to run for a period of 15 years and yields a revenue of 11¾c per ton for each long ton of rock removed railroad weight being taken. The lease carries the usual stipulations for protection of the State forest. It also requires that a minimum quantity of 25,000 tons shall be removed or paid for in each year. The usual clause of forfeiture accompanies it; also a bond with surety in the sum of $2,500. Revenues from this lease to date amount to $164.41.

E. F. MILLARD. (No. 297).

A lease bearing date November 8, 1917, was awarded to E. F. Millard, of Martinsburg, W. Va., under the Department of Forestry act, for the purpose of removing sand from the Caledonia State Forest. The term of the lease is 15 years from date and reserves a royalty of 5c per ton for each short ton of sand removed. Bond in the sum of $2,000 accompanies the lease guaranteeing its proper performance. A minimum quantity of 10,000 tons shall be removed or paid for each

year. The usual clause of forfeiture accompanies the lease and the usual precautions are to be taken against wilful waste, damage, fire, or negligent operation.

LEASES FOR THE OCCUPANCY OF BUILDINGS.

During the period covered by this report the following leases were executed for the occupancy of buildings:

No. 267, January 1, 1916. Lease at will to Clay W. Bigelow for the occupancy of a dwelling house in Treaster Valley, Armagh township, Mifflin county. Mr. Bigelow was an employee of the Department of Forestry.

No. 268, May 15, 1916, to Robert I. Brown, an employee of the Department of Forestry, for the Weiser house at Pine Grove Furnace, Cumberland county.

No. 271, June 15, 1916, to Guy R. Beaston, for the occupancy of a dwelling known as the Cole house, in the McClure State Forest, Perry county. Rental reserved by this lease is $1.50 per month.

No. 275, October 5, 1916, to Frank O'Donel, for the occupancy of the dwelling known as the Cole house, in the McClure State Forest. Rent reserved, $1.50 per month.

No. 276, September 26, 1916, to Guy R. Beaston, for the occupancy of the dwelling known as the Hockenberry house, in the McClure State Forest. Rental reserved, $1.50 per month.

No. 282, November 17, 1916, to Robert Reitz, an employee of the Department of Forestry, for the occupancy of a property known as the Whipple farm, near Charter Oak, in the Bear Meadows Forest.

No. 288, August 24, 1917, to James W. Eckels, Esq., for the occupancy of a portion of what is known as the Mansion House at Pine Grove Furnace, Cumberland county. Rental reserved, $2.00 per month.

TIMBER SALES.

No. 264, contract dated March 4, 1916, with Joel A. Culver, trading as Joel A. Culver & Co., contractors and builders of Wellsboro, Pa., covering the sale of railroad ties, switch ties, sawed lumber, and fence posts from an area of the Chatham State Forest known as Oak Ridge, in Delmar township, Tioga county. The operation was to be under the direct supervision of the forester in charge.

No. 265, contract dated February 19, 1916, with John E. Davis and Elmer E. Davis for removal of certain timber from a portion of the Chatham Forest known as Spoor Hollow, in Chatham township, Tioga county. The area from which timber is to be removed is about 40 acres and the contractors agree to pay $4.05 per thousand feet board measure for all merchantable species. The usual precautions are required against fire and wasteful operation.

No. 266, contract dated April 20, 1916, with Edwin O. Meadow for the removal of chestnut timber suitable for telephone and telegraph poles in the Pennypacker Forest, Perry and Cumberland counties. The stumpage prices range from 2c per foot for 25-foot poles to 5c per foot for 70-foot poles. The contract requires that tops of all trees shall be lopped apart, the usual precautions taken against fire and wasteful operation, and is secured by a surety bond in the sum of $1,000. The revenue to date under this contract amounts to $283.58.

No. 270, contract and supplemental agreement dated respectively May 29, 1916, and March 24, 1917, with C. K. Sober, for the purchase of certain timber within the Whetham State Forest on tracts in the warantee names of John Taggart, Joseph Priestly, Daniel Graffius, William Wilson, Charles Pleasants, Mark Schlonaker, and Robert Ritchey. Prop timber shall be paid for at the rate of $1.00 per ton; pulp wood, 160 cubic feet, 75c per cord; acid wood, 128 cubic feet, 25c per cord; railroad ties, depending upon species and quality, range in price from 10c to 18c; trolley ties from 4c to 7c; mine ties, 2c to 3c; telephone poles, 2c per lineal foot for 20-foot poles, to 4c per lineal foot for 60-foot poles; bark, $2.00 per ton; saw timber, $6.00 per thousand feet board measure. This contract is secured by a surety bond in the sum of $500.00 and requires the usual precautions against fire and wasteful operation. Tops of trees must be lopped. Contract extends for a period of five years. Revenue to date under this contract amounts to $1,342.00.

No. 273, contract dated August 15, 1916, with George Campbell for the removal of a quantity of black birch from warrants 1,585 and 1,588, Morris and Duncan townships, Tioga county. The purpose of the cutting of this birch is to produce birch oil distillate, and the price to be paid therefor is 50c per still of 200 cubic feet. Revenues to date under this contract amount to $13.50.

No. 274, contract dated October 14, 1916, with Fred E. Hamilton for the purchase of black birch on warrant 4,693, Hull Forest, for the purpose of making birch oil distillate. The price to be paid is 50c per still of 216 cubic feet.

No. 277, contract dated October 16, 1916, with O. L. Bailey, for the removal of dead, dying, and undesirable timber on warrant 5,708, Cameron county at $3.50 per thousand feet. The contract is to subsist for six months and the usual precautions are required against fire and wasteful operations. Roads are to be kept in repair and branches and tops carefully lopped. Revenue to date from this contract amounts to $411.28.

No. 280, contract dated November 27, 1916, Clyde Chapman, for removal of black birch from a portion of the Loyalsock State Forest, for the purpose of making birch distillate. The price to be paid therefor is 50c per cord of 128 cubic feet. The usual precautions against fire and wasteful operations are required. Revenues to date amount to $56.80.

No. 281, contract dated January 6, 1917, with William Henry for the sale of black birch from a portion of the Loyalsock State Forest, for the purpose of making birch distillate. The price to be paid is 50c per cord of 128 cubic feet. The usual precautions are required against fire and wasteful operation.

No. 284, contract dated April 10, 1917, with F. B. Woodward, Inc., for the sale of black birch from warrant 2,102, Hull Forest, for the purpose of making birch distillate. The price to be paid is 50c per cord of 128 cubic feet. The usual precautions are required regarding fire and wasteful operation.

RIGHTS OF WAY.

No. 269, contract dated May 5, 1916, with Thaddeus S. Vincent and Henry Vincent, trading as the Vincent Lumber Co., for a right of way 20 feet wide for a distance of 3,200 feet through the Rothrock State Forest, at an annual rental of $23.00 for a period of five years. Total revenue received to date is $46.00

No. 287, contract dated April 6, 1917, with the Penn Central Light and Power Co. for a right of way 60 feet wide for a distance of 454 rods over a portion of the Greenwood State Forest in Huntingdon and Mifflin counties, for the purpose of erecting a power transmission line. The contract is to subsist for a period of 20 years and yields an annual revenue of 5c per rod for the length of the right of way.

No. 289, contract dated October 15, 1917, wherein James T. Cummings, K. E. Peachey, A. B. McNitt and Mable T. Barr, of Union, Brown, and Armagh townships, Mifflin county, grant to the Commonwealth the privilege of tapping a water supply main pipe for the purpose of carrying running water into the dwelling of the forest ranger at Barrville. For this privilege the Department pays an annual rental of $6.00.

No. 290, October 6, 1917, with William Caprio and Anthony Grieco, trading as Caprio & Grieco, for a right of way 60 feet wide for a period of twenty years, for the purpose of constructing a standard gauge railway through the Brumbaugh Forest in Tod and Penn townships, Huntingdon county. This right of way lies over the roadbed of the old Juniata and Southern Railroad Co., which was abandoned, the lease covering the prior right of way thereby becoming void. The annual rental to be paid is $10.00 for a period of ten years, with the right of renewal. The grantees are required to take extra precautions regarding forest fires, and to protect the forests, through which the railroad is intended to run, from other damage.

No. 291, contract dated June 19, 1917, with R. S. Meiser and W. A. Meiser, trading as R. S. Meiser & Bro., for a right of way over certain roads in the Pennypacker State Forest for the removal of timber belonging to the contractors. The consideration for the grant is nominal, accompanied by a surety bond of $1,000, covenanting to keep the roads in a good travelable condition and to maintain and leave them in this condition after the hauling is finished.

TELEPHONE CONTRACTS.

No. 272, contract dated August 1, 1916, whereby the Department of Forestry becomes a subscriber to the Huntingdon and Clearfield Telephone Co. for the use of the employees of the Clearfield Forest, and for the purpose of connecting the Department's present line of telephone with that of the grantor company. The rent is $5.00 per year for each telephone with extra charges for bracket and cross arm attachments and regular toll charges.

No. 278, contract dated October 23, 1916, with the Perry county, Pa., Telephone and Telegraph Co., for the installation of a telephone in the dwelling house of Forest Ranger Leroy Koontz at an annual rental of $12.00.

No. 286, contract dated April 10, 1917, with Andrew Frazier, granting the privilege for a telephone connection between the Ole Bull State Forest line and the dwelling house of Mr. Frazier. In return for this license the grantee agrees to act as a fire warden in his home region and permit the use of his telephone free of charge for all local calls, toll charges to be paid.

No. 292, contract dated October 1, 1917, by which the Boalsburg Electric Light Co. grants to the Commonwealth of Pennsylvania, for an annual rental charge of $4.50, a license right to attach and maintain two telephone wires with brackets and insulators upon forty-five poles of the Light Company so as to connect the residence of Frank McFarlane to the local system. The agreement is terminable upon 30 days' notice by either party.

STATE BOARD OF GAME COMMISSIONERS, FOR THE CLEARFIELD PRESERVE. (No. 262).

Under an Act of Assembly approved April 16, 1915, P. L. 135, it is provided that State game preserves may be located within State Forests if the consent of the Department of Forestry be obtained therefor.

By agreement dated January 6, 1916, between the Department of Forestry and the State Board of Game Commissioners, it is agreed that the Game Commissioners may establish a game preserve within the State Forest in Clearfield county. The approval of the Department of Forestry is therein specifically given.

It is proposed that similar agreements shall be entered into covering all the other game preserves which, with the consent of the Department of Forestry, have been located within State Forests.

SURVEYS.

The early part of January, 1916, was taken up with the drafting and calculation of the area for the surveys made of the Doubling Gap purchase in 1915, in Perry and Cumberland counties. The Chief Surveyor was assisted by Foresters Mustin, Morgan, and Baer.

At the same time plans were being drawn for the rebuilding of the Trough Creek (Brumbaugh) forest house and barn. This work was taken up in April 1916, and was completed in September.

August 1, the house for the ranger near Sinnemahoning, Cameron county, was laid out, and the work started. This work was pushed forward rapidly and was about completed at the year end.

The surveys for the new commission known as the Home for Feeble Minded Women, at Laurelton, Union county, were made the latter part of September, and the drafts drawn by Forester Mustin.

December 1st the examination of the Drinker lands in Clearfield County was begun.

On December 11th, with Foresters Mustin, Neefe, and Harbeson, the survey of the lands offered by O. M. Campbell and Mrs. Jerald, was begun. Cold weather and deep snow.

During this year Foresters Mustin, Edgar H. Smith, Baer, Morgan, and Muller were kept working on the new Foresters' Maps as

rapidly as possible, the renewal of worn-out maps, and changing of the old maps, with indexing and filing. This work took up all their time.

The drafting, tracing, and calculations for the Haldeman Forest, in Dauphin county, occupied nearly all the time of the office force during January, 1917, and was in charge of Forester Mustin.

Forester Ira L. Shenefelt was added to the office force February 20th, and began his work of tracing the survey of Pike county made by Frank Schorr.

Forester Smith began the new map E-7 on March 1st, while Forester Shenefelt began the tracing of all the new maps showing the new game refuges.

The maps, drafts, and surveys for the case of the Commonwealth vs. Midland Mining Co., known as the "Thomas Hamilton Warrant," Centre county, took up much time during May, June and July.

Forester Mustin's resignation February 1st, Forester Smith's leaving for Fort Niagara, May 9, and Forester Shenefelt's leaving soon after, depleted the drafting office force badly. Only Forester McPherson and the Chief Surveyor remained for the work.

With Surveyor Wetzel, Mr. Moore began the Kulp survey on Shade Mountain, Snyder and Juniata counties. This was completed in September and soon after Forester McPherson left for the front.

The survey of the new purchases in the Pine Creek district for Forester Neefe was made the latter part of September by Surveyor Wetzel.

On October 21st the Chief Surveyor, with Surveyor Wetzel and Forester Hogeland, went to Hammersley Fork and began the survey of the Kettle Creek lands for a new map to replace the old 3-C-14 map.

The Sizerville and Emporium surveys and the Harter surveys at Dry Run, Clinton county, were attended to by Mr. Moore. Wetzel and Hogeland were compelled to vacate the Kettle Creek work on account of a scourge of smallpox. After being vaccinated they returned to the office.

On December 4th, with Wetzel and Hogeland, Mr. Moore went to Waterville, and with Forester Neefe surveyed the Bitting lands offered by O. M. Campbell. On Saturday, December 8th, a blizzard caught the party on top of Button Mountain and compelled delay until the following week. The balance of the year was spent in the office drafting and calculating that work.

On August 1, 1917, Mr. Charles L. Wetzel, who had been temporarily engaged in Department survey work for several years, was permanently added to the bureau.

The atlas of Pike county, which has been in preparation for three years in odds and ends of time, was completed and traced by Forester

Mustin and bound in atlas form. Special praise is due Mustin for the neat pen work, careful warrant connections, and the index. This atlas contains all of the original warrants ever issued covering lands in Pike county, and is made in township sections.

Mr. Moore, the Chief Surveyor, has frequently called attention to the inaccuracy of most of the township lines, and some of the lines between counties. This Department is continually buying lands situate in various townships, and in all cases it is necessary for the Bureau of Surveys to determine from its very often inaccurate records the acreage which should be allowed each township for fixed charges. The township lines in this State seem to fall into three classes:

1. Township lines which have been recognized in the erection of new counties as a boundary line for the new county.
2. Township lines which have been established by order of court in the various counties, in divisions of existing large-area townships.
3. Township lines usually recognized by road supervisors and school directors.

The first class is generally well located on the ground by act of Assembly.

The second class lines in very few cases are delimited by the court in sufficiently distinct language so that any surveyor could be certain he is right in running them. Such lines are seldom completed on the ground.

The third class is a wobbly line which may take a citizen into one township for the purpose of road taxation, and into another township for school attendance for his children. This class is the most difficult for assessors and tax collectors, as well as for this Department. When an assessor of "A" township comes to make his assessment, "B" claims he is in "C" township. When assessor "C" comes for the same purpose, "B" claims he is in "A" township. There are state maps, atlas maps, road maps, and other general maps showing varying locations for township lines, and in fact for a few county lines. This is readily seen by consulting maps of the older counties.

The establishing of the various county and township lines throughout the State should be done by some department of the Government which is conversant with the warrants issued in the early days. We suggest either the Department of Internal Affairs or the Department of Forestry, in conjunction with it. This Department's survey work now is an actual reproduction of the original survey work from the earliest warrants to the latest warrants, as they were actually run on the ground at the time. The laws so far passed for the running of the county lines are so complex and the descriptions in the laws erecting the counties so vague, that great difficulty is encountered in determining just what was really meant, while surveys and procur-

ing evidence of surveys are so expensive that no two or three county courts care to go to the expense unless absolutely necessary. The running of lines attempted in late years has not all been finished. Even with the loss of taxes before it, the losing township will not petition the county court for redress on account of the expense. The result is that we are making maps and paying taxes on a more or less guess work basis so far as township lines are concerned; and planting costs, fire costs, and labor costs for this Department must remain on the same basis until the Legislature shall devise some remedy. It should not be a matter for courts, but some body created by State law. On this commission it is suggested there should be a representative of the Geological Survey, the Department of Internal Affairs, Department of Education, and the Department of Forestry. County and township lines could thus be laid down permanently and definitely marked in a business-like manner.

PUBLICITY.

At the 1915 summer convention of the Pennsylvania Foresters, held in Galeton during the month of August, a resolution was unanimously adopted setting forth the need of publicity and education in the work of the Department, and authorizing the President of the Foresters' Association to appoint a committeee to meet with the State Forest Reservation Commission, and urge them to sanction the establishment of a bureau to care for this work. All the members of the Commission looked favorably upon the proposition, and took immediate action by voting to establish the Bureau of Publicity. Forester N. R. McNaughton, then in charge of the Karthaus Forest, was detailed to start the work, and was called to the Harrisburg office of the Department on November 6, 1915.

Plans were then under way for installing the Department's exhibit with the Pennsylvania Welfare and Efficiency Conference, and this was the first work undertaken by the new bureau. With the assistance of Forester Maurice Mustin, an exhibit was installed which occupied about 300 square feet of floor space. It was a decided success, due largely to the decorative scheme designed by Mr. Mustin. (See Plate 4).

The first news articles were sent out about January 1st, 1916, to a list of 425 selected newspapers. Since then, within the period covered by the report, about 450 news articles have been issued. No effort has been made to take up large amounts of space in the newspapers, or

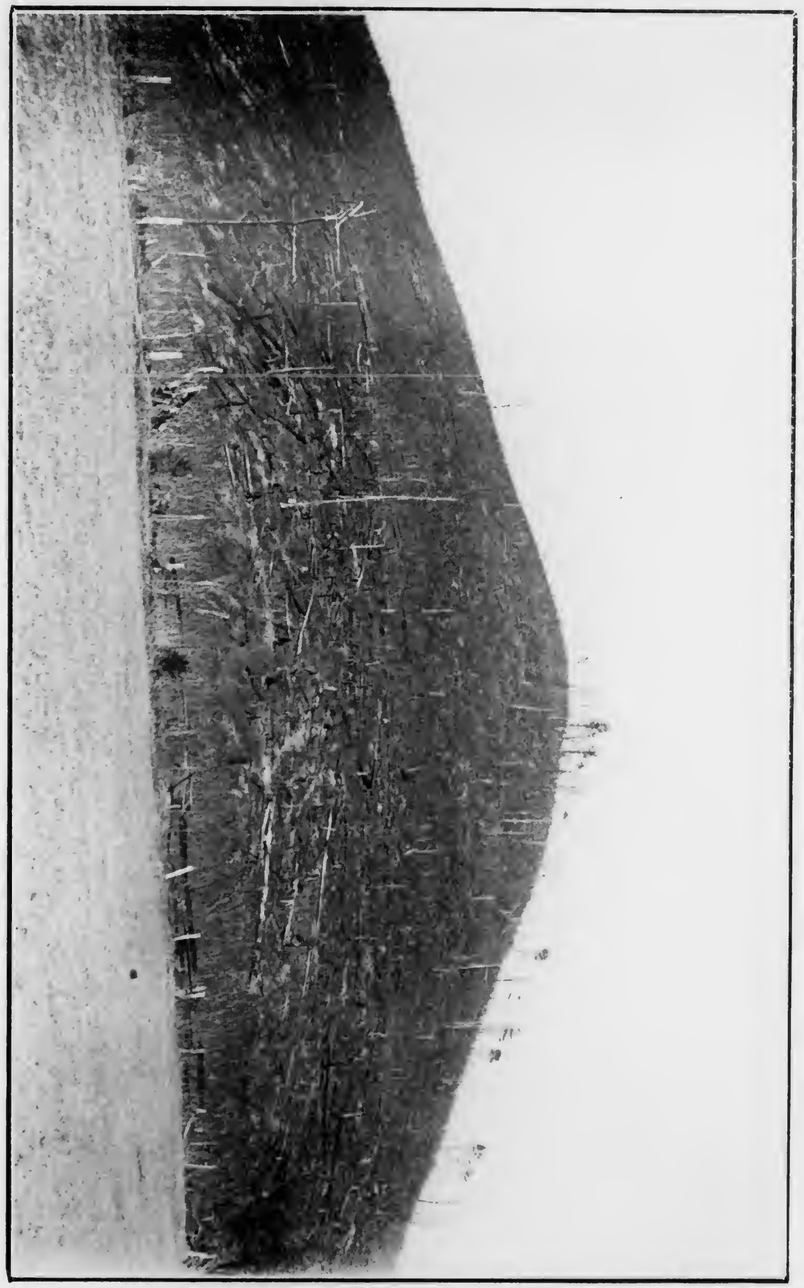

Plate 3. Typical burned-over land on the Sizerville Forest. Planted in 1914.

Plate 4. Exhibit of the Department of Forestry at the Welfare and Efficiency Conference, Harrisburg.

to send out material regularly, whether it has news value or not. As a result, the number of articles has not been exceptionally large, but they have been used freely, they have been strictly truthful, and they have had real news value.

On January 1st, 1916, and again on January 1st, 1917, statements were secured from all the foresters covering every line of work on their forests. These statements were summarized in a large tabulation, the first of its kind, giving a complete statement of work done on the State Forests to date and during the current year. In connection with these tabulations special information was collected on the present status of the chestnut blight on the State Forests.

The collection of lantern slides has been relabeled, listed by number, and indexed. Since the creation of this bureau there is no question but that our own slides and the State Museum slides on forestry have been at least twice as active as before.

During the months of January, February, and March, 1916, Foresters Horning, Hogentogler, VanHorn, and Wells worked on the checking and preparation of a table to give at one reading the cubic contents of a stump top, or log of any dimensions. This table was referred to in the report of the Karthaus State Forest for the years 1914-5. The checking was practically completed, and the table is now almost ready for the printer. These figures will be of value in the collection of volume data, and will be made up in handy form for the use of the foresters.

The most important work done in point of actual effect on the public was the co-operative agreement entered into with the Vitagraph Company of American for the making of a motion picture of a forest fire. All the large motion picture companies of America were circularized, and from the favorable replies which were received, of which there were about six, it was decided that the Vitagraph Company offered the best proposal. Forester Mustin called on four of the large producers in New York City about March 1st, 1916, and, after weighing matters pro and con, finally signed a contract with Colonel Jasper Ewing Brady, scenario editor for the Vitagraph Company. The contract stated that the Department was to furnish a scenario, certain properties and housing facilities, and to stage on the Mont Alto State Forest a forest fire with all the preliminary and subsequent scenes which might be of interest to the public. On its part, the Vitagraph Company agreed to furnish a director and several actors, to revise our script, to take the picture, to furnish us with a free copy and to circulate their own copy through the regular commercial channels. All of these conditions were strictly adhered to by both parties, and the picture was completed May 13th, 1916. The Vitagraph production was released in one reel in October, 1916, under the title "The Curse of the Forest," and the Department's copy, in

three reels, was first used at Conneaut Lake on September 5th, on the occasion of the Wild Life League Convention. Since then the Department's copy has been viewed by not fewer than 200,000 people. In June, 1917, a contract was entered into with the Eastern Motion Picture Company to make a copy of the Department's picture, which copy is now in active circulation.

Undoubtedly the motion picture gives the Department's work the best publicity it has ever had. The success of "The Curse of the Forest" proves this statement. But the Department cannot be expected to do publicity work on a large scale with two copies of one motion picture. Forestry has enough interest to justify the making of a series of motion pictures, and it is unquestionable that the Department should have enough copies of each film to give showings all over the State. Four copies could be kept moving constantly. If we expect to use these effective means of bringing our work to public notice, we should have future films made up in pathescope size, twenty exposures to the foot, and have at least one pathescope projector in constant active service.

In addition to the main efforts mentioned above, a multitude of little things was turned over to this bureau for attention, among others, the following:

The bureau handled practically all correspondence about utilization and sales from farmer's wood lots.

It gave out all information about the work of the Department.

About 150 special articles were prepared for publication in magazines and technical papers.

A series of twelve "Tree Talks" was issued.

Four large window charts were made up by hand.

Plans were made for installing a forestry exhibit in the flag room of the State Museum, and orders have been given for cutting and seasoning eighty wood specimens. These are to be sawed and finished during the coming year.

A system was devised and installed for filing and charging cuts, lantern slides, books, and photographs.

Exhibits were made at Clearfield, Stroudsburg, and Conneaut Lake.

About a dozen lectures on forestry were given, and several talks in connection with showings of the motion picture.

Several lectures were prepared for use by foresters in the field, and lantern slides arranged in series to accompany these lectures.

The filing system for bulletins and magazines was revised.

Bulletin 14, describing the Department's exhibit, was published.

An alphabetic list of forest, fish, and game associations was prepared and all of the organizations were circularized.

Articles on the Department's work were prepared for use in several textbooks for the public schools.

On May 8, 1917, Mr. McNaughton took over the work of the Bureau of Silviculture, the former chief of the bureau, W. Gard. Conklin, having resigned to enter a training camp. From that date less attention could be given to work of the Bureau of Publicity.

SILVICULTURE.

Forester W. Gard. Conklin was in charge of this Bureau from the beginning of the period covered by this report until May 8, 1917. On that date he entered the training camp at Fort Niagara and Forester N. R. McNaughton was placed in charge.

War conditions have affected the work of this Bureau seriously. On January 1, 1916, the working force of the Bureau consisted of the Forester in charge, one stenographer, and about ten assistants. On December 31, 1917, enlistments and resignations had reduced this force to the Forester in charge and the stenographer. All the work cannot be kept up to date under these conditions, and our records have suffered accordingly.

This Bureau covers the following operations:

(1) Seedling Production.
(2) Artificial Reforesting.
(3) Growth Studies and Records.
(4) Stock and Topographic Surveys.

Most of this work is covered fully by the tabulations following. This part of the report will summarize briefly the work done under each of the above subdivisions.

Seedling Production.

For the production of forest tree seedlings, the Department maintains four large nurseries with an area of 29.1 acres, and nineteen small nurseries with an area of 2.77 acres. Fully ninety per cent of the seedlings come from the large nurseries, and the small ones are maintained largely because of their educational value. In a few cases the small nurseries exist because of the difficulty of transferring seedlings from the large nurseries for local reforesting operations.

Nursery shipments, as shown by the tabulations following, average from 4,000,000 to 6,000,000 per year. Planted 5 ft. x 5 ft. these seedlings cover an area of approximately 2,000 to 3,000 acres a year. It would be easy to increase our nursery production to 15,000,000 seedlings annually, but it is an open question whether or not this

increase would not put our reforesting operations far in advance of our protection work. There seems to be little sense in planting large numbers of trees in remote areas where the fire risk is serious. If adequate protection be guaranteed, expansion of our planting program to twice its present size can be accomplished in not more than three years.

Two schools of thought have sprung up with widely divergent views of our future planting operations. One school maintains that plantations should never be made in large contiguous areas because of possible future difficulty in management. This school also contends that a large part of our burned over lands, which were once regarded absolutely barren of valuable species, will reforest itself by natural regeneration if given sufficient time. The other school contends that since it is unquestionable that we now own vast areas which are producing nothing of value, we should plant as rapidly as possible in order to make these areas produce in the shortest possible time; the planting, of course, to be co-ordinated with the work of the Bureau of Forest Protection, and to be advanced just as rapidly as adequate protection can be assured. This school also says that while it is possibly true that some of our land will reforest itself naturally in the course of years, the species which will appear on it will be of inferior quality, and mostly hardwoods mixed with pure weeds; also that while waiting for this natural regeneration we will be wasting valuable time.

Regardless of the merits of these contentions, there is only one solution of our planting problem for next year: we *must* plant trees in large plantations or else let the trees go to waste in the nurseries. We have 8 000,000 seedlings available for planting in the spring of 1918, and an additional 7,000,000 which would be large enough to use in case of necessity. Our field force has been depleted by enlistments and resignations until it is altogether out of the question to use this 8,000,000 nursery stock in a large number of small plantations. We could not give the small plantations adequate supervision, and it is an open question whether or not we could buy sufficient camp equipment to undertake them. If we are to save the trees from the loss which will be unavoidable if they remain another year in the nursery beds, our plantations next spring must be fewer in number and larger in size, and we must put forth greater effort to induce private planters to use our stock. The logical solution of the difficulty is to make about five plantations of a million trees each; to bend every effort to induce private planters to take care of an additional 1,500,000, and to allot the remaining 1,500,000 to the small plantations. Doubtless there are silvicultural reasons why a single plantation of a million trees should not be made, but these reasons must give way to the exigencies of the present situation.

Following are brief reports on each of the large nurseries. Details as to the trees shipped from these nurseries will be found in the tables following:

Mont Alto Nursery.—The entire nursery area, approximately 8.1 acres, is now under cultivation. The number of trees on hand exceeds all previous records.

Sections lying fallow have been improved by Canada peas and buckwheat. When these crops were plowed down, manure and charcoal were added and the soil is now in excellent shape. There is no longer any question as to the value of charcoal in modifying heavy soils.

Fall sowing has been continued and, for this nursery, has proved much more successful than spring sowing. The nursery now contains more than 1,000 beds of 100 sq. ft. each. Over 200 beds were sown in November, 1915, and the seed germinated about May 1, 1916. Every bed had a complete stand.

Two-year Scotch pine from this nursery cost 72c per thousand in the bundles; two-year white pine, from 68c to $1.06.

The acid soil experiment mentioned in the last report has been continued with repeated favorable results. It seems probable that an acid soil condition is antagonistic to the damping off fungus.

The Skinner water system has been split up into small units, which are easily transferred from one section to another. In this way it is possible to water all the one-year stock with a very small amount of pipe.

The 1916 inventory of this nursery shows 2,080,000 trees which should be shipped, 770,000 to remain for another year, and 2,875,000 one-year-olds and small two-year-olds. The total is 5,725,000. See Table No. 43 for 1917 inventory.

Financial Statement, 1916.*

Labor Cost Summary:

	Team.	Students.	Payroll.	Total.
1913,	$32 36	$323 06	$816 41	$1,171 83
1914,	43 64	390 41	849 31	1,283 36
1915,	35 79	283 55	934 56	1,253 96
1916,	26 04	352 15	961 83	1,340 62

*The other large nurseries submit statements similar to this. Lack of space makes it impossible to publish them all.

Fixed Charges:

Forester,	$500 00	
Land,	48 28	
Tools,	20 72	
Water system,	25 00	
Roads and drains,	10 17	
Buildings,	7 32	
		$611 49

Current Pro-Rata:

Administration,	$1 50	
Experimentation,	2 05	
Maintenance,	67 98	
Water system,	56 21	
Compost,	106 93	
Screens,	167 96	
Tools,	3 35	
		$405 98
Total overhead,		$1,017 47

To be pro rated over 830 beds, or $1.09 per bed.

Charge to Capital:

Grounds,	$39 40	
Tools,	7 07	
		$46 47

Ledger Balance:

Dr. Accounts:

Incidentals,	$866 74	
Labor,	1,340 02	
Fixed charges,	611 49	
Inventory,	6 20	
1915 charge,	142 90	
		$2,967 35

Cr. Accounts:

Charge to capital,	$46 47	
Ornamentals,	15 86	
Academy,	1 50	
Shipping expense,	297 47	
Inventory,	53 37	
Transplants,	108 90	
1917 beds,	72 91	
Fallow,	4 39	
Hardwoods,	4 48	

Failure: Scotch pine,	10 27	
Compost inventory,	23 27	
1914 beds,	167 38	
1915 beds,	528 58	
1916 beds,	1,632 55	
		$2,967 35

Asaph Nursery.—The area of this nursery is 20 acres, 14 of which were in seed beds in 1917. In addition there is an area set aside for the raising of shade trees to be planted along the State Highways. The following species were transplanted for this purpose in the spring of 1915, and were spaced 3 ft. x 3 ft.:

Species.	Number.
Basswood,	6
Black cherry,	57
Red oak,	9
White ash,	1,312
Honey locust,	1,327
American elm,	1,350
Norway spruce,	1,380

In 1916 the following seedlings were transplanted into this area:

Species.	Number.
American elm,	4,200
Pitch pine,	3,366
Sugar maple,	2,310
White ash,	1,050

The work of this nursery has been handicapped by scarcity of labor. It is almost impossible to get men, women, or boys unless continuous employment be guaranteed.

The 1916 inventory shows a total of 2,879,000 trees in the nursery, with 1,621,000 of these available for planting in the spring of 1917. See Table No. 43 for 1917 inventory.

Greenwood Nursery.—The area of this nursery is about three acres, all in seed beds. A system of crop rotation is being followed so that about one-third of the nursery will be in green manure each year.

The 1916 inventory gives a total of 2,445,000 seedlings in the nursery of which 990,000 are available for planting in the spring of 1917. See Table No. 43 for 1917 inventory.

About four-fifths of an acre has been set aside for the production of hardwood transplants for planting along the State Highways.

There was considerable loss in seedlings in this nursery from the damping off fungus. The coniferous leaf disease, L. Pinii, has appeared in the nursery and is especially damaging to white pine seedlings. Repeated spraying with Bordeaux mixture seems to hold the disease in check.

This nursery produced two-year conifers in the spring of 1916 for about $1.00 per thousand.

Clearfield Nursery.—The area of this nursery is about four acres, but it has the largest inventory of any of the nurseries. In the fall of 1916 there were 9,577,000 seedlings in the nursery, of which 5,125,000 could have been shipped in the spring of 1917. See Table No. 43 for 1917 inventory.

Two-year-old seedlings have been produced for as low as 23c per thousand in the beds. Seventy-five thousand three-year-old white pine cost 80c per thousand in the beds.

Artificial Reforesting.

The tables on the following pages, and statements in the fourth paragraph above under the heading "Seedling Production," cover this phase of the work. The number of seedlings planted on the State Forests in the year 1917 was several million under the high records of 1916. The decrease was due almost entirely to scarcity of labor. Private planting, on the contrary, shows a substantial increase for 1917 over 1916.

During 1916, five-year planting plans were prepared for each of the State Forests. These plans were followed quite closely for 1916, but labor conditions made it necessary to modify them in 1917. In 1918 it is altogether likely that more severe labor shortage and enlistment of the foresters will make necessary still further modifications. There seems to be no good reason for drawing up new plans until the war is over and our foresters return. If new plans were to be drawn up, they would be subject to the same modifications as the old plans.

One of the chief reasons for the increase in private planting was the publication and distribution in the fall of 1916 of Department Bulletin 15, "Reforesting Pennsylvania's Waste Land." There has been a large demand for this bulletin, and a reprint has been ordered. It gives specific information on planting stock and methods.

Free Distribution of Seedlings.

The Department of Forestry furnishes seedling trees free of charge for private planting under the following conditions only:

(1). No charge is made for the trees, but the applicant must pay cost of packing and hauling, which is usually from 20c to 40c per thousand.

(2). Trees are for forest planting only, and not for shade or ornamental planting.

(3). They must be planted in Pennsylvania.

(4). Application should be made several months before planting season, which begins about April 1st.

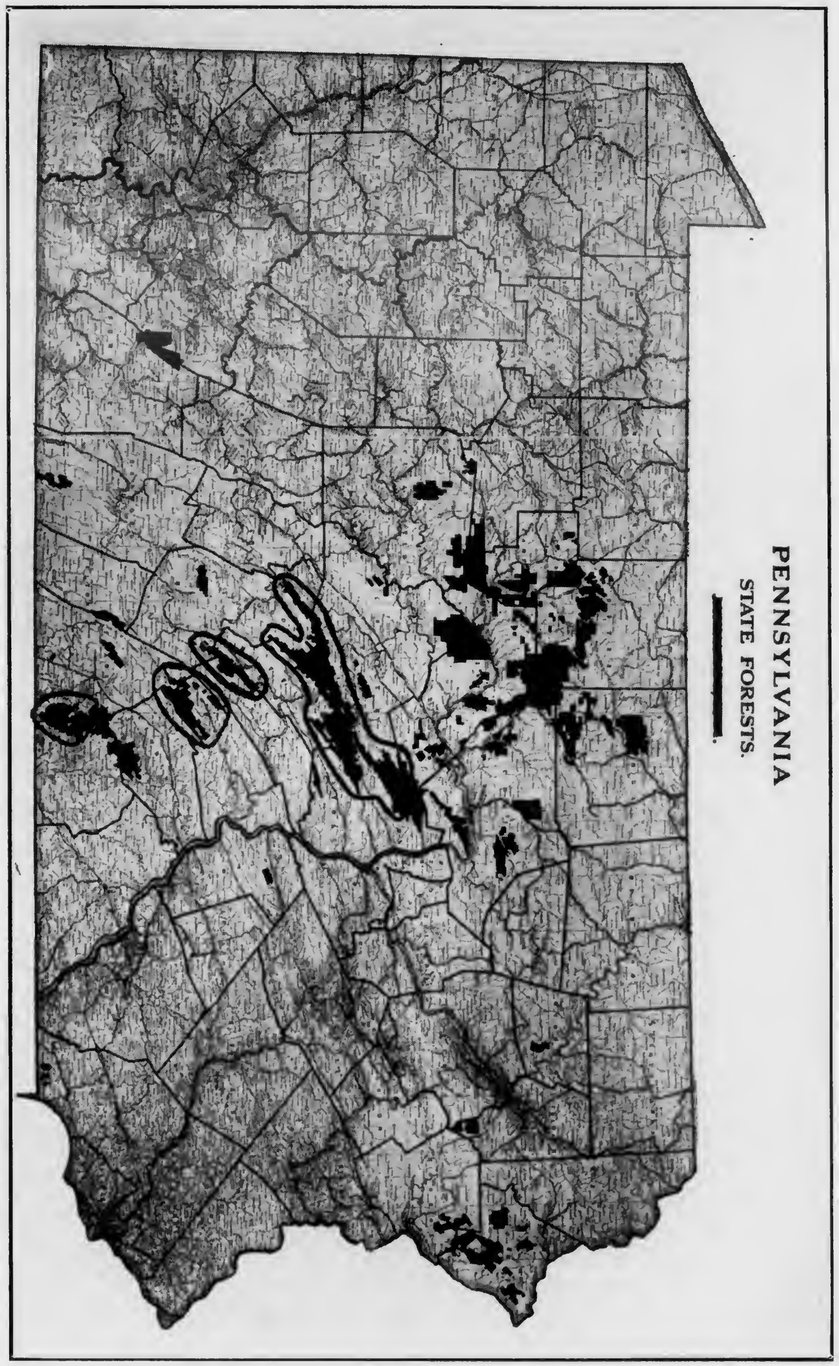

Plate 5. Pennsylvania's State Forests. Total area, 1,017,773 acres. Topographic surveys are completed for the areas surrounded by curved black lines.

Plate 6. Scene in the Buffalo Forest, Union county. The forest fire was automatically stopped by the bare highway. Burned brush to the left.

Plate 7. Handboard of the type used on many of the State forests.

(5). Notice as to whether or not the application is granted will be given several weeks before the trees are shipped, and notice of shipment will be given two or three days in advance.

(6). Seedlings must be planted without delay.

(7). Report must be made to the Commissioner of Forestry covering cost of planting and conditions under which planting is done.

(8). Additional reports on the condition of the plantation must be made whenever requested by the Department of Forestry.

(9). Fewer than 500 seedlings will not be furnished, and fewer than 100 of any one species will not be furnished, i. e., an application for 500 seedlings must include not more than five species, preferably fewer.

A matter in which there should be more experimentation is fall planting. We have made a number of fall plantations, but not in sufficient quantities or on a wide enough range of sites to give us reliable data. In many of our forest regions farm labor can be secured easily in the fall but cannot be secured at any price in the spring.

Another matter which deserves careful study is the question of storing over winter seedlings lifted late in the fall, so that the nurseries may be relieved of a part of the spring congestion. The fact that others advise against this is no reason why we should not conduct our own experiments, especially when the stake is so much worth while. Could we develop a successful method of storing coniferous seedlings over the winter, we should, at a stroke, lessen our nursery troubles by at least one-third. Scarcely a season passes when it would not be possible to plant seedlings at least a week or two before the nurserymen can lift them. In times like the present this saving of a week or two may be the difference between success or failure of the whole planting program.

Growth Studies and Records.

In the fall of 1916 special forms were prepared and records were taken by the sample plot method of every plantation made to date on the State forests. Plantations were classified as follows: Class 1 to include all plantations which resulted in an establishment of 50 per cent or over. Class 2 to include all plantations which were partly successful, but in which the establishment was less than 50 per cent. Class 3 to include all plantations which had resulted in total failure.

Permanent sample plots were established in all the more important plantations and in some of the larger plantations several plots were established. The area of the plots was usually about one-tenth of an acre. The height at the end of each year's growth was taken for every planted tree in the plot. Diameters were not taken except where the D. B. H. was one inch or more. The field data were edited in the De-

partment offices and some of the results are summarized in tables numbered 38 and 39. At the time this work was started it was the intention to take annual measurements of heights and diameter growth in every one of the permanent sample plots, but the depletion of the field force made it impossible to continue this work in 1917.

Stock and Topographic Surveys.

The best possible summary of the work done in this line is given in the illustration herewith. (See Plate 5). The Department reports for the years 1912-1913 and 1914-1915 give details as to the methods pursued in making the surveys and rough statements as to cost per mile. No new work was undertaken after January 1, 1917, but all surveys then begun have since been completed. Topographic surveys have been made and drafted for the following forests:

Barree,	18,061	acres
Bear Meadows,	21,000	"
Buffalo,	20,628	"
Greenwood,	25,000	"
Jacks Mountain,	19,429	"
Kishacoquillas,	33,800	"
Mont Alto,	20,000	"
Penn,	15,000	"
Seven Mountains,	14,000	"
Pennypacker,	24,800	"
White Deer,	22,500	"
Total,	234,218	"

STATE FOREST ACADEMY.

Mont Alto.

The following students are recent graduates of the Academy, and on September 1st of the respective years of graduation were assigned to the forests indicated:

1914.	Forest.
Leonard G. Barnes,	Nittany
Howard W. Siggins,	Seven Mountain
Russell Fawley,	Kishacoquillas
W. Harold Horning,	Lushbaugh
Walter Leach,	Bear Meadows
Robert W. Stadden,	Office
Walter J. Bartschat,	Jacks Mountain
Harry C. VanHorn,	New Bergen
Charles E. Woof,	Greenwood
1915.	
Charles E. Baer,	Office
Howard H. Morgan,	Office
James E. Powers,	Pine Grove
H. B. Rowland, Jr.,	Office
1916.	
Joe R. Blouse,	Whetham
L. M. Detz,	Office
Chas. C. Hogeland,	Kishacoquillas
Benj. D. McPherson,	Office
J. C. Middour,	Caledonia
J. Newton Morton,	Buffalo
Marvin H. Moyer,	Slate Run
Harold F. Port,	Stone
Ira L. Shenefelt,	Pocono
Edw. S. Smith,	Pine Grove
H. A. Smith,	McClure
1917.	
Howard E. Breneman,	Not assigned
John E. Buch,	" "
Josef B. Harlacher,	" "
L. Edgar McNulty,	" "
Edwin B. Miller,	" "
Ralph W. Musser,	" "
Lloyd D. Root,	" "
Samuel W. Windle,	" "

At the graduating exercises in 1916, the address to the students was delivered by Dr. B. E. Fernow, Dean of the Forestry School at the University of Toronto, and then President of the Society of American Foresters. This was Dr. Fernow's first visit to the Academy. After an inspection of the property and on becoming acquainted with its work and purpose, he very warmly commended the institution as well as the general business-like forest policy of the Department. Dr. Fernow is without exception regarded the foremost American forestry educator, and an opinion of this character coming from him is well worth while.

The graduating exercises for 1917 were omitted because of the earlier entry of most of the third-year students into the army service of the United States.

During the period covered by this report, numerous faculty changes have occurred due to resignations and entry into the National service. Prof. E. A. Ziegler, the director of the Academy, left in May, 1917, to enter the officers' training camp at Fort Niagara. Prof. J. S. Illick, senior member of the faculty, was appointed his successor. W. E. Montgomery, a graduate of the class of 1913, conducted his classes to August, 1917, and then entered the officers' training camp at Fort Oglethorpe, Georgia. W. B. Evans, a member of the class of 1912, was called to the Academy in September, 1917, and is carrying the majority of Mr. Ziegler's courses. William Netoffsky, a member of the faculty since 1910, resigned in June, 1917, to accept a position as Research Chemist in New York City. Eugene P. Deatrick assumed Mr. Netoffsky's courses in September, 1917. He is devoting special attention to the courses in forest soils. Wm. H. Eyster, Professor of Biology, resigned in September, 1916, to accept a position in a New York Normal School, and was succeeded by Coleman A. Harris, of Bucknell University. During the summer of 1916, the Director, Mr. Ziegler, was accorded the privilege of pursuing graduate study at Columbia University.

Prominent mention must be made of the fact that a friend of the Academy, Mr. Maurice Fels, of Philadelphia, made a gift of 115 selected volumes to the Academy library, the largest single addition received during the history of the school. Besides books relating to the courses pursued at the Academy, there are many relating to biography, travel, poetry, literature, and fiction.

During the last two years the courses of study have been carefully rearranged and standardized. Forest Mechanics was added as a new course and is intended to train the students in the construction, operation, and repair of machinery, engines, boilers, telephone systems, fire towers, and other appliances which a forester uses.

Text books were formerly furnished the students free of cost. We now believe that actual ownership of the text books will conduce to

their better use and preservation and induce the students to establish for themselves the nucleus of a forest library. For the further reason that the Academy appropriations could scarcely be made reach, the students have since the autumn of 1916 been required to purchase their own text books. The furnishing of other facilities at the Academy remains as formerly.

The horses which the second and third year students were required to provide for themselves were a distinct feature of Academy life. They enabled the young men to become adepts in horsemanship and were useful in many ways in forest work. It was with regret that we were compelled to have the students dispose of their horses and during the present crisis get along the best we can without them. While they rendered most useful service and enabled the whole student body to reach forest fires quickly, the increased cost of maintaining them was such that it was not possible to do so out of our appropriations. The rapidly contracting purchasing power of a dollar did not permit us to continue this branch of the service. It is hoped that with the return of normal times this feature of Academy life may be restored.

It is proposed to republish the Academy catalogue or announcement, in which will be found a history of the Academy, the students who have attended and have been graduated therefrom, and the courses of study as they are now given. The printing will not take place until next year.

A more detailed statement of the students who have entered Federal service and the units with which they are serving, will be found in the earlier part of this report.

The Academy financial statement will be found incorporated elsewhere with the general financial statement.

The original purchase of the Academy lands and buildings and the immediately surrounding areas, was provided for by special appropriation act of 1903. Since this purchase was made numerous repairs to buildings have been required, and new buildings erected. These include the rebuilding of barns and out houses, erection of a double cottage for members of the faculty, who also serve as foresters upon the Mont Alto Forest, and the building of a new dormitory. The last was provided for by special legislative appropriations of 1907 and 1909.

A revision of the Academy rules has been made and will be put in force with the beginning of the school year in September, 1918. These rules are as follows:

Students at the Forest Academy are in the service of the State. Conscientious work and cheerful obedience in school and forest are prerequisites to a successful student career.

ABSENCE FROM THE SCHOOL.

If a student desires to be absent from the school for more than two hours he will obtain a signed concession card during office hours from the Director or a

designated instructor acting for him. This regular concession card the student will retain until he returns, and then, if properly filled out, place in the office basket not later than 8 A. M. following his return.

Regular concessions will not be granted between Monday morning and Saturday noon during the fall and winter terms. Special concessions, however, will be granted during the week if the student submits detailed and sufficient reasons for granting the special privilege.

No regular concessions will be granted during the fire seasons. Students must remain within hearing of the fire bell, except on order or special permit.

The number and duration of concesssions will be determined by the attitude and scholarship of each student. Good standing will tend towards an extension of the concession privilege, while poor scholarship and inferior conduct will reduce the number of granted concessions, and in extreme cases the concession privileges may be entirely withdrawn.

If a student misses a recitation due to his absence from school, through sickness, or for other causes, he will submit the reasons therefor to the Director and, if possible, obtain a signed excuse card. The presentation of a signed excuse card to an instructor indicates that the student may make up his deficiencies and be credited therefor. An unexcused absence cannot be made up. The method of making up the absence will be determined by the instructor concerned.

BELLS:

Rising, ...6:30 A. M.
Breakfast, ... first, 6:45.
last, 7:00.
Dinner, ... first, 12:00 M. Saturday and Sunday 11:45 A. M.
last, 12:05 P. M. Saturday and Sunday 12:00 M.
Supper, ... first, 5:55 P. M. Saturday and Sunday 4:55 P. M.
last, 6:00 P. M. Saturday and Sunday 5:00 P. M.
Recitation, ...Warning bell—10 minutes of the hour.
Final bell—on the hour.
Retiring, ...First, 10:00 P. M.
Lights out, 10:30 P. M.

No meals will be served or lodgings supplied to any guests of students.

If a student will be absent from the dining room for any meal not covered in a concession he will report his proposed absence to the Director.

Students must be in their rooms after 7:30 P. M. except by special permit.

OFFICE HOURS AND SUPPLIES:

The Director will be in his office at stated period posted on the bulletin board.

Supplies may be obtained at stated hours posted on the bulletin board.

All charged supplies, such as books, instruments, etc., must be returned before leaving the school or whenever called for.

LAUNDRY:

Each student will receive

3 bed sheets	2 pairs blankets
2 pillow cases	1 pillow

for which he will be held responsible.

Each student must secure a laundry bag and turn in his laundry at Wiestling Hall by 7:30 A. M. each Monday. Bag and laundry must be marked with owner's woven initials.

	Piece Count.
1 sheet*,	1
1 pillow case*,	1
2 towels,	2
1 pair pajamas or night shirt,	2

2 suits of underwear,	4
3 shirts*	3
4 handkerchiefs,	2
3 pairs of socks,	3
Total,	18 pieces allowed

*Limit of this item. Collars and fine starched shirts students must have done at steam laundry.

MAIL:

In alphabetical order, as posted on the bulletin board, students will leave Wiestling Hall for Post Office immediately after supper with outgoing mail and bring back incoming mail not later than 7:30 P. M.

A substitute must be secured if the designated student cannot serve.

Morning mail may be had after if has been distributed.

Vacation addresses must be filed if mail is to be forwarded.

DEPOSIT:

Every student shall deposit with the Director the sum of $5.00 against which will be charged the value of property damaged, destroyed, or lost. Should this fund become exhausted an additional deposit will be called for. The Director of the school shall be the judge as to what property damaged, destroyed, or lost shall come within the provisions of this rule.

FIREARMS:

The use of standard firearms is recommended. Students must always be careful in discharging any form of firearm, and in no instance shall they be discharged within or from the windows of buildings.

CONDITIONS:

A condition results if a final or term examination, or the general grade falls below 75. The instructor concerned will indicate the method of removing the condition, but the grade then given will be 75. Re-examinations will be given within two weeks after failure is announced.

MISCELLANEOUS:

Students must keep their rooms clean and in good order.

Students must take all possible precautions against starting fire in their rooms.

Alcohol or oil stoves are forbidden in rooms.

Drinking intoxicants is absolutely forbidden both at and away from school.

Cigarette smoking and tobacco chewing are prohibited.

Smoking is not allowed in Wiestling Hall or in class rooms.

Few rules are required for thoughtful and faithful students.

Before taking a chance, confer with the Director. He will help interpret the rules or advise you concerning unwritten rules.

TABLE 1.—DEPARTMENT FINANCES.

	Appropriations for the Period Ending May 31, 1917.		Appropriations for the Period Ending May 31, 1919.	
Salaries of Officers and Clerks.				
Commissioner of Forestry, salary,	$6,000 00		$6,000 00	
Clerks, salary,	6,000 00		6,000 00	
Deputy Commissioner of Forestry, salary,	5,000 00		5,000 00	
		$17,000 00		$17,000 00
Contingent expense,		4,000 00		9,000 00
Expenses, members of commission,		5,000 00		
Foresters and Rangers, salary and expenses,		225,000 00		245,000 00
Survey,		4,000 00		5,000 00
Draftsmen, bookkeepers, stenographers, and messengers,		18,000 00		18,000 00
Labor,		85,000 00		115,000 00
Incidentals,		50,000 00		
Title Examination—amount appropriated,	$3,000 00			
Amount transferred from purchase of land,	2,500 00	5,500 00		4,000 00
Fixed charges for roads,		42,000 00		42,000 00
Fixed charges for schools,		42,000 00		42,000 00
Forest fire appropriation,		45,000 00		80,000 00
Purchase of Land—amount appropriated,	$40,000 00			
Amount transferred to title examinteions,	$2,500 00	37,500 00		130,000 00
Forest Academy,		20,000 00		20,000 00
District Foresters, salary and expenses,		8,500 00		10,000 00
Deficiency, Foresters' and Rangers' salary and expenses,		17,000 00		
Material and equipment,				65,000 00
Total,		$625,500 00		$807,000 00

	Amount Expenses from above Appropriation Period Ending May 31, 1917.		Amount Expended from above Appropriation up to and including Dec. 31, 1917.	
Salaries of Officers and Clerks.				
Commissioner of Forestry, salary,	$6,000 00		$1,750 00	
Clerks, salaries,	5,750 00		1,750 00	
Deputy Commissioner of Forestry,	5,000 00		1,458 31	
		$16,750 00		$4,958 31
Contingent expense,		3,999 16		2,365 68
Expenses, members of commission,		3,955 06		
Foresters' and Rangers' salaries and expenses,		241,968 56		63,190 25
Survey,		3,999 86		1,698 55
Draftsmen, bookkeepers, stenographers, and messengers,		17,996 43		4,115 00
Labor,		84,995 66		19,687 61
Incidentals,		50,000 00		
Title examination,		5,034 08		1,537 14
Fixed charges for roads,		40,172 88		20,218 46
Fixed charges for schools,		39,549 02		19,915 52
Forest fire appropriation,		45,000 00		24,712 53
Purchase of land,		37,500 00		212 40
Forest Academy,		19,999 98		5,726 65
District Foresters, salary and expenses,		8,499 93		2,775 06
Material and equipment,				14,887 22
Amount of appropriation not used to balance,		6,079 38		617,999 62
Total,		$625,500 00		$807,000 00

TABLE 2.—ANALYSIS OF APPROPRIATIONS AND EXPENDITURES.

It is unfortunate that the appropriation years of the State government do not correspond with the report years of the Department, or the calendar year. Appropriations run from June 1 of a legislative year to June 1st of a succeeding legislative year. If we assume that the appropriations available June 1st, 1915, were moved forward to January 1st, 1916, and the 1916 and 1917 expenditures of the Department made therefrom, a comparison of debits and credits thus taken would be substantially correct, and exhibit approximately and closely the status of the business on a percentage basis.

(A).—APPROPRIATIONS.

(A)—Appropriations.

	Amounts.		Per Cent.	
Total of appropriations, regular and deficiency,		$625,500 00		100.
Officers and clerks,	$17,000 00		*2.72	
Contingent expenses,	4,000 00		.64	
Commissioners' expenses,	5,000 00		.80	
Foresters and Rangers,	242,000 00		38.70	
District Foresters,	8,500 00		1.35	
Surveys,	4,000 00		.64	
Draftsmen, stenographers, bookkeepers, etc.,	18,000 00		2.87	
Labor,	85,000 00		13.58	
Incidentals (materials and equipment),	50,000 00		8.00	
Purchase of land, including title examination,	43,000 00		6.87	
Road and school fixed charges,	84,000 00		13.43	
Protection, forest fire,	45,000 00		7.20	
Forest Academy,	20,000 00		3.20	
	$625,500 00	$625,500 00	100.	100.

*Calculated to the nearest hundredth of one per cent.

(B).—EXPENDITURES.

	Amounts.		Per Cent. of Appropriation.	
Total expenditures,		$619,420 62		99.028
Officers and clerks,	$16,750 00		2.678	
Contingent expense,	3,999 16		.639	
Commissioners' expenses,	3,955 06		.632	
Foresters and Rangers,	241,968 56		38.685	
District Foresters,	8,499 93		1.350	
Surveys,	3,999 86		.639	
Draftsmen, stenographers, bookkeepers, etc.,	17,996 43		2.870	
Labor,	84,995 66		13.580	
Incidentals (materials and equipment),	50,000 00		8.000	
Purchase of land, including title examination,	42,534 08		6.810	
Road and school fixed charges,	79,721 90		12.746	
Protection, forest fire,	45,000 00		7.200	
Forest Academy,	19,999 98		3.199	
	$619,420 62	$619,420 62	99.028	99.028

(C).—PLANTING COSTS.

1916.		Per Cent.
Value of seedlings,	$8,748 18	34.13
Transportation,	786 04	3.07
Camping,	3,092 82	12.07
Soil preparation,	343 33	1.34
Labor,	10,341 56	40.36
Foresters' time,	1,419 00	5.53
Rangers' time,	881 22	3.44
Miscellaneous,	15 45	.06
	$25,628 20	100.
1917.		
Value of seedlings,	$6,435 72	29.90
Transportation,	811 50	3.77
Camping,	2,271 81	10.57
Soil preparation,	402 06	1.87
Labor,	9,384 62	43.61
Foresters' time,	1,352 24	6.24
Rangers' time,	848 75	3.94
Miscellaneous,	22 28	.10
	$21,528 98	100.

(D).—FOREST PROTECTION.

1916.

Amount of appropriation June 1, 1915—June 1, 1917,	$45,000 00	
Amount expended therefrom in 1915,	4,403 85	
Balance available January 1, 1916,	$40,596 15	
Expenses paid and incurred to January 1, 1917:		
Salaries and expenses of all officers and wardens,		$6,510 32
Tools,		67 66
Postage,		575 00
Gummed stickers for educational purposes,		112 20
Patrol,		1,008 36
Protective associations,		856 38

Fire extinction, wages paid to fire fighters,	13,932 60
Overdraft on patrolmen's salary (returned to the Treasury),	41 60
	$23,104 12
Balance available to June 1, 1917,	17,492 03
	$40,596 15

1917.

Balance available to June 1, 1917,	$17,492 03
Appropriation June 1, 1917, to June 1, 1919,	80,000 00
Amount available for all purposes from January 1, 1917, to June 1, 1919,	$97,492 03

Since the 1917 appropriation is carried over to June 1, 1919, and many payments are not actually made until long after being incurred, it will be more satisfactory to report the 1917 activities later. In the meantime see Report of the Chief Forest Fire Warden for 1917, Department Bulletin No. 17.

TABLE 3.—EXPENSES AND REVENUES BY FORESTS.

	1916.		1917.	
	Expenses.	Receipts.	Expenses.	Receipts.
Austin forest,	$3,338 62	$5 00	$2,435 75	$428 13
Bald Eagle forest,	1,670 68	12 15	1,608 38	13 75
Bedford forest,	2,250 20	1,038 19	2,333 14	261 67
Bear Meadow forest,	2,662 41	77 00	3,898 00	128 02
Barree forest,	2,878 87	1,188 55	2,845 28	1,858 23
Blackwell forest,	3,342 61	172 01	3,575 38	209 77
Buchanan forest,	2,761 38	91 00	2,887 66	13 20
Buffalo forest,	4,663 44	107 85	4,304 29	111 80
Black forest,	3,579 33	62 00	3,066 19	177 99
Brumbaugh forest,	7,420 87	31 00	2,672 32	36 40
Caledonia forest,	7,847 04	761 50	9,095 03	736 04
Chatham forest,	922 17	152 64	----------	62 20
Clearfield forest,	5,022 94	2,158 56	4,398 62	810 20
Coudersport forest,	2,315 13	112 92	2,733 52	59 36
Greenwood forest,	7,959 22	107 31	7,644 91	1,215 64
Grays Run forest,	1,441 26	276 03	1,227 62	23 78
Haldeman forest,	28 03	----------	13 91	----------
Hull forest,	2,393 29	44 29	1,658 10	128 83
Hopkins forest,	3,535 25	65 29	3,139 77	87 13
Jacks Mountain forest,	3,188 50	1,475 87	3,091 20	170 83
Karthaus forest,	2,245 91	97 20	3,592 20	566 12
Kishacoquillas forest,	3,444 43	245 18	3,620 55	193 00
Kettle Creek forest,	2,044 46	----------	2,576 99	13 90
Lackawanna forest,	836 48	----------	849 87	----------
Loyalsock forest,	2,543 52	104 94	2,460 30	72 00
Lushbaugh forest,	2,939 78	128 17	2,132 54	107 70
Mont Alto forest,	16,829 22	3,204 65	18,556 70	2,813 21
Medix forest,	2,091 56	105 00	2,369 22	114 50
Minisink forest,	2,929 56	183 00	3,110 10	308 68
McElhattan forest,	2,805 00	----------	2,525 64	33 08
McClure forest,	1,537 21	5 50	823 70	57 70
Nittany forest,	2,244 34	1,251 85	2,225 05	1,206 33
New Bergen forest,	1,988 36	10 00	----------	38 37
Ole Bull forest,	4,872 32	239 95	4,944 95	43 00
Penfield forest,	2,756 13	33 41	2,199 63	49 20
Pennypacker forest,	5,553 35	80 00	3,919 08	472 38
Pine Grove forest,	5,758 99	4,510 61	6,447 01	4,981 75
Pine forest,	2,972 16	75 00	4,907 74	1,127 50
Pocono forest,	4,088 06	493 52	4,740 26	153 97
Promised Land forest,	2,013 91	8 00	1,809 66	144 54
Penn forest,	2,678 58	20 00	3,285 74	36 83
Rothrock forest,	2,504 55	289 73	2,108 36	251 67
Shade Mountain forest,	600 00	----------	1,403 35	----------
Sinnemahoning forest,	6,531 42	432 65	2,738 45	553 08
Slate Run forest,	832 18	21 00	885 10	32 00
Snow Shoe forest,	3,650 69	20 00	3,616 42	49 40
Stuart forest,	3,339 72	938 47	2,937 27	6 00
Stone forest,	6,757 92	240 16	6,154 38	76 61
Sizerville forest,	1,819 79	10 00	2,367 40	56 95
Seven Mountain forest,	3,895 22	321 77	2,924 26	58 81
Tea Spring forest,	2,929 91	25 00	2,554 45	63 30
White Deer forest,	1,597 02	75 60	3,489 77	126 27
Westfall forest,	480 00	----------	480 00	10 00
Whetham forest,	1,806 75	300 45	1,595 75	1,164 70
Young Womans Creek forest,	2,207 34	50 00	1,228 20	54 17
Total,	$183,347 08	$21,459 97	$174,209 16	$21,569 60

From the foregoing, it may be seen that in 1916, the State owned forest yielded 11.7% of the amount spent for local administration that year, and in 1917, the yield was 12.3%.

TABLE 4.—PURCHASE AND DISPOSAL OF TREE SEEDS, 1916.

Where Used.	White Pine.		Red Pine.		Pitch Pine.		Scotch Pine.		European Larch.		Norway Spruce.	
	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.
Stone, Asaph Nursery,	498	$453 90	25	$122 75	50	$94 05	50	$47 00	60	$56 40	60	$66 00
Mont Alto,	400	361 50	25	125 16	10	19 13	5	4 70	10	9 40	31½	34 65
Greenwood,	75	67 50	30	150 00	40	69 92	40	37 60	12	11 28	25	27 50
Clearfield,	300	270 00	30	150 00	10	19 13	40	37 60	60	56 40	50	55 00
Penfield,	50	45 00			3	5 74	5	4 70	15	14 10	8½	9 35
Austin,	10	9 00										
Black Forest,	20	18 00	2	10 00	2	3 83	4	3 76	10	9 40	10	11 00
Caledonia,	15	13 50	2	10 00	5	9 57	1	94	1	94	1	1 10
Chatham,							2	1 88	2	1 88		
Hull,	4	3 60							2	1 88		
Medix,									2	1 88		
Nittany,	4	3 60										
Ole Bull,	10	9 00							5	4 70	5	5 50
Pine Grove,	5	4 50	1	5 00	2	3 83			5	4 70	2	2 20
Seven Mountain,	2	1 80					3	2 82			1	1 10
Snow Shoe,	3	2 70							2	1 88		
Whetham,	9	8 10										
Lushbaugh,	5	4 50							4	3 76	5	5 50
Central Pennsylvania Forest Fire Protective Association,	13	11 70									1	1 10
Totals,	1,423	$1,287 90	115	$572 91	122	$225 20	150	$141 00	190	$178 60	200	$220 00

TABLE 4.—Continued.

Where Used.	Douglas Fir.		White Fir.		Blue Spruce.		Bull Pine.		Arbor Vitae.		Total.	
	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.	Lbs.	Cost.
Stone, Asaph Nursery,	2	$5 50	2	$3 50			2	$3 00	2	$5 00	751	$857 10
Mont Alto,			1	1 75	1	$4 00			1	2 50	484½	562 79
Greenwood,			1	1 75			2	3 00	1	2 50	226	371 05
Clearfield,			1	1 75			1	1 50	1	2 50	493	593 88
Penfield,											81½	78 89
Austin,											10	9 00
Black Forest,											48	55 99
Caledonia,											25	36 05
Chatham,											4	3 76
Hull,											6	5 48
Medix,											2	1 88
Nittany,											4	3 60
Ole Bull,											20	19 20
Pine Grove,											15	20 23
Seven Mountain,											6	5 72
Snow Shoe,											5	4 58
Whetham,											9	8 10
Lushbaugh,											14	13 76
Central Pennsylvania Forest Fire Protective Association,											14	12 30
Totals,	2	$5 50	5	$8 75	1	$4 00	5	$7 50	5	$12 50	2,218	$2,693 86

TABLE 5.—PURCHASE AND DISPOSAL OF TREE SEEDS, 1917.*

Species.	White Pine.		Red Pine.		Norway Spruce.		Fur. Larch.		Red Spruce.		Scotch Pine.		Jack Pine.		Jap. Larch.		Bull Pine.		Total.	
Where Used.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.	Lb.	Cost.
Austin,	10	$9 08			10	$11 00							5	$10 00					25	$30 68
Black Forest,	14	12 68			5	5 50	10	$9 50											29	27 68
Caledonia,	10	9 08			5	5 50	2	1 90	1	$2 25			5	10 00					23	23 73
Clearfield,	100	90 82			25	35 75	44	41 80	10	22 58			20	40 00					199	225 95
Greenwood,	30	27 24	10	$50 08	21	23 10			5	11 29			30	60 00			5	$10 00	101	181 71
Mont Alto,	81	73 33	30	150 35	10	17 50	5	10 00									5	10 00	131	261 18
Penfield,	10	9 08					10	9 50					5	10 00					25	28 58
Pine Grove,	8	7 78			5	5 50	10	9 50											23	22 78
Stone (Asaph),	141	128 02	10	50 08	40	44 00	39	37 40	14	31 62	48	$47 00	35	70 00	5	$16 25			332	424 37
Total,	404	$367 11	50	$250 51	121	$142 85	120	$119 60	30	$67 74	48	$47 00	100	$200 00	5	$16 25	10	$20 00	888	$1,231 06

*Charges for bags and postage included in costs.

TABLE 6.—STATE FOREST PLANTING, FOR THE YEAR 1916.* DIRECT SEED SOWING;—EXPERIMENTAL.

State Forests and Foresters in Charge.	Number of plantations made.	Species of seed used.	Quantity of seed used. (Lbs.)	Area planted. (Acres.)	Cost of seed.	Cost of sowing.	Total cost.	Cost per acre.
Buffalo—A. C. Silvius,	1	Black Cherry	20	1	$1 18	$7 00	$8 18	$8 18
White Deer—R. B. Winter,	1	Black Cherry	40	1	1 10	8 00	9 10	9 10
Totals and averages,	2		60	2	$2 28	$15 00	$17 28	$8 64

*Part of seed was planted in the fall of 1915.

TABLE 7.—STATE FOREST PLANTING—DIRECT SEED SOWING. SUMMARY BY YEARS.

Year.	Number of plantations made.	Species Sown.	Quantity. Pounds.	Quantity. Bushels.	Area treated. (Acres.)	Cost of seed.	Cost of sowing.	Total cost.	Average cost per acre.
1902	1	Chestnut,		.78	.7				
1904	1	Black walnut,		6.0	3.8	$6 00	$291 00	$297 00	$78 15
1905	1	Chestnut,		2.0					
1906	2	Hick., oak, B. W.,		47.0	5.6	9 40	56 27	65 67	11 73
1907	1	Black walnut,		19.0	4.6	2 85	7 55	10 40	2 26
1908	8	W. P., B. W.,	25.5	3.25	40.65	52 57	90 54	143 11	3 24
1909	4	W. P., B. W.,	40.0	14.0	66.68	120 50	35 78	116 28	1 74
1910	8	W. P., B. W., oak,	6.0	30.25	21.2	17 43	77 87	95 30	4 49
1911	12	7 species,	42.9	48.25	35.38	26 95	114 09	141 04	3 98
1912	26	10 species,	56.0	39.75	65.51	97 78	152 54	250 32	3 82
1913	11	7 species,	27.0	5.5	39.1	37 68	93 93	131 61	3 36
1914	26	8 species,	58.33	8.0	36.7	53 93	89 65	143 58	3 91
1915	8	5 species,	22.50	6.0	13.3	27 63	30 26	57 89	4 35
1916	2	Black cherryy,	60.0		2.0	2 28	15 00	17 28	8 64
1917		No direct seed sowing in 1917,							
Totals,	111		338.23	229.78	335.22	$415 00	$1,054 48	$1,469 48	

KEY TO THE SPECIES.

W. P. White pine.
P. P. Pitch pine.
S. P. Scotch pine.
N. S. Norway spruce.
E. L. European larch.
B. F. Balsam fir.
D. F. Douglas fir.
H. Hemlock.
B. W. Black walnut.
W. W. White walnut.
Ch. Chestnut.
W. O. White oak.
R. O. Red oak.
C. O. Chestnut oak.
S. M. Sugar maple.
W. A. White ash.
B. C. Black cherry.
Hick. Hickory.
Cat. Catalpa.

TABLE 8.—STATE FOREST PLANTING—DIRECT SEED SOWING. SUMMARY BY FORESTS, 1902-1917 INCLUSIVE.
Quantity of Seed Used, Area, and Costs.

Forest.	Year.	Number of plantations made.	Species Sown.	Quantity. Pounds.	Quantity. Bushels.	Area treated (acres).	Cost of seed.	Cost of sowing.	Total cost.	Average cost per acre.	Living, 1916.
Austin,	1910-11	2	W. P., N. S.,	5.5		3.9	$3 25	$7 56	$10 81	$2 77	3,770
Bald Eagle,	1911-12	2	B. W.,		2.75	1.01	2 75	6 72	9 47	9 38	
Barree,	1912	1	W. P.,	1.0		1.0	1 30	3 00	4 30	4 30	
Bear Meadows,	1912-14	14	W. P., S. P., P. P., N. S.,	15.0		11.0	30 30	10 78	41 08	3 73	
Bedford,	1912	1	W. P.,	3.0		5.0	3 90	80	4 70	94	
Blackwells,	1915	2	W. P., S. P., N. S.,	8.0		3.9	9 30	4 21	13 51	3 46	10
Brumbaugh,	1913-14	6	W. P., S. P., P. P., B. W.,	6.0	4.0	6.1	10 96	48 80	59 76	9 80	1,280
Buffalo,	1911-16	7	W. P.,S. P.,P. P.,N. S.,E. L.,B. F.,B. C.	40.0	34.0	48.3	30 73	143 22	173 95	3 60	
Buchanan,	1910-14	10	W. P., S. P., P. P., N. S., R. O.,	8.0	13.0	20.0	21 70	45 42	67 12	3 36	2,500
Caledonia,	1906-10	4	W. P., W. O., C. O., Ch.,	4.0	14.8	21.7	13 52	54 24	67 76	3 12	
Chatham,	1908-15	6	W. P., B. W., C. O., S. M., W. W., W. A.	78.5	8.25	15.4	18 56	22 22	40 78	2 65	12,500
Clearfield,	1909	1	W. P.,	20.0		57.0	40 00	12 80	52 80	93	
Grays Run,	1911	1	B. W.,		4.0	.98	2 00	3 57	5 57	5 71	110
Greenwood,	1906-09	3	W. P., B. W.,	5.0	54.0	20.0	16 75	94 52	111 27	5 56	
Hopkins,	1904	1	B. W.,		6.0	3.8	6 00	291 00	297 00	78 15	1,620
Hull,	1914	1	W. P., S. P.,	.83		2.0	98	6 98	7 96	3 98	
Jacks Mountain,	1909	2	W. P.,	10.0		2.88	20 00	8 98	28 98	10 06	
Karthaus,	1912	1	W. P.,	1.0		1.0	1 30	2 04	3 34	3 34	
Kettle Creek,	1914-15	2	W. P.,	7.0		1.0	8 38	2 10	10 48	10 48	800
Lackawanna,	1914	1	W. P.,	1.0		11.5	1 62	1 98	3 60	2 40	
Loyalsock,	1912	1	W. P.,	7.0		6.0	9 10	9 00	18 10	3 02	
Lushbaugh,	1915	1	W. P.,	.5		.9	59	6 60	7 19	7 98	
McClure,	1912	2	W. O., C. O.,		9.5	9.4	21 95	73 72	95 67	10 18	
McElhattan,	1913	1	W. P., E. L.,	10.0		8.0	11 50	17 00	28 50	3 56	
Mont Alto,	1906	1	W. O., B. W., Hick.,		12.0	1.0	3 00	5 00	8 00	8 00	600
Ole Bull,	1914	1	W. P.,	8.0		.5	10 80	1 35	12 15	24 30	
Penfield,	1911	1	B. W.,		2.0	.5	2 00	6 00	8 00	16 00	
Pennypacker,	1909-15	12	B. W., C. O., Cat.,	2.5	62.0	114.0	8 45	61 84	70 29	5 02	10,960
Pine,	1909-12	4	W. P.,	20.0		14.1	33 00	12 89	45 89	3 25	860
Pocono,	1910-12	2	W. P., S. P.,	1.5		.8	2 35	2 80	5 15	6 47	
Rothrock,	1911	1	W. P.,	2.0			2 70		2 70		
Slate Run,	1912	1	W. P., P. P., S. P., N. S., D. F.,	8.0		15.0	16 96	3 60	20 56	1 37	720
Stone,	1908	5	W. P., B. W., Ch.,	12.0	3.3	20.65	30 07	44 68	74 75	3 62	14
Stuart,	1915	1	W. P.,	1.0		.8	1 19	5 01	6 20	7 75	
White Deer,	1910-16	9	W. P., P. P., S. P., N .S.,D. F.,H.,B. C.,	51.9	.25	16.1	18 04	34 05	52 09	3 24	665
Totals,		111		338.23	229.8	335.22	$415 60	$1,054 48	$1,469 48		36,426

KEY TO THE SPECIES.

W.P. White pine.
P.P. Pitch pine.
S.P. Scotch pine.
N.S. Norway spruce.
E.L. European larch.
B.F. Balsam fir.
D.F. Douglas fir.

H. Hemlock.
B.W. Black walnut.
W.W. White walnut.
Ch. Chestnut.
W.O. White oak.
R.O. Red oak.

C.O. Chestnut oak.
S.M. Sugar maple.
W.A. White ash
B.C. Black cherry.
Hick. Hickory.
Cat. Catalpa.

TABLE 9.—SEEDLING SHIPMENTS FROM ASAPH NURSERY, PRIVATE PLANTING, 1916.
Species, Age and Number.

Name.	Address.	White pine, 2 yr.	Scotch pine, 2 yr.	Pitch pine, 2 yr.	Norway spruce, 2 yr.	European larch, 2 yr.	Sugar maple, 1 yr.	White ash, 3 yr.	Honey locust, 1 yr.	Black cherry, 1 yr.	American elm, 3 yr.	Totals.
Acacia Club,	Coudersport,	16,000	2,000		4,000	2,000						24,000
Altoona Water Department,	Altoona,	19,000	10,000	5,000	5,000	1,000		5,000	5,000			50,000
Aurand, W. E.,	Milroy,									200		200
Barlett, R. G.,	Montgomery,	800		200	700			100	100			1,900
Beetem, Chas. G.,	Carlisle,						1,200			100	100	1,400
Bergen, A. B.,	Newton,	500	200	100	300	200			200			1,500
Boltz, E. M.,	Lebanon, No. 8,			300				150	150			600
Broadhurst, Ellen D.,	Holicong,	200	100		100	100						500
Bronson, A. F.,	Girardsville,	1,500			600							2,100
Brown, P. S.,	Phoenixville,								500			500
Buttles, J. M.,	Jamison City,									200		200
Calhoun, A. G.,	Hammersleyfork,	5,000		2,000								7,000
Campbell, Homer,	Wellsboro,	250							250			500
Country Club of Northampton County,	Easton, No. 3,	2,000	500				500	500			500	4,000
Creveling, W. G.,	Stillwater, No. 1,	500			500							1,000
Crystal Springs Rod and Gun Club,	Clearfield,				2,000							2,000
Dept. of Parks and Public Property,	Harrisburg,				5,000				1,000			6,000
Derr, J. Miles,	Milton, No. 2,	1,500		500	500		500	500				3,500
Dively, Mrs. Morgan,	Claysburg,	200	100	200				100				600
Dorman, M. B.,	Mill Hall,				500							500
Dunn, Arthur,	Waverly,	3,000	1,000		1,000							5,000
Eastern Pa. Inst. for Feeble-Minded,	Penhurst,	500			500							1,000
East Stroudsburg, Borough of,	East Stroudsburg,	1,000										1,000
Ehrenfeld, Chas. A.,	Leechburg,	500	500	500	500							2,000
Elder, Irvin C.,	Chambersburg,			1,000	1,000				1,000			3,000
Emerick, R. L.,	Coudersport,				200							200
Feeg, Ammon C.,	Robesonia,	2,200			1,600				500			4,300
Fenton, John W.,	New Germantown,									200		200
Fenton, J. S.,	Canton,									200		200
Fleitz & Sproul,	Benton,	9,000		4,000	1,000							14,000
Friends Hospital,	Frankford,	15,000	2,000		1,000							18,000
Great Bear Tract, Inc.,	Paoli,	600			300			350	50	250		1,550
Galeton Borough,	Galeton,	600	50		300	200						1,150
Groschke, A. W.,	46 Barney St., Wilkes-Barre,	100	200		100	100		100	100			700
Hilderof, Stepher,	Stroudsburg,	4,000	1,000	900	500	100						6,500
Jaquish, E. W.,	Canoe Camp,	250					200	200				650
Johnstown Water Co.,	Johnstown,		20,000	5,000	5,000						1,000	31,000
Keffer, E. R.,	Harrisburg,	2,000			2,000			1,000				5,000
Kerstetter, W. C.,	Coburn,									200		200
Knupp, H. E.,	Russ Bldg., Harrisburg,	250			250							500
Kreitner, J. W.,	Keating Summit,	2,000										2,000
Lancaster Elec. Light, Heat & Power Co.	Lancaster,	500	500	250	200							1,450
Leacock, N. H.,	Thornhurst,									200		200
Lewis, Mrs. H. W.,	Downington,		100		200	100		100	100			600
Lewis, R. R.,	Coudersport,	25,000			5,000							30,000
Love, C. B.,	Slate Run,									200		200
Ludwig, W. D.,	Johnstown,	200										200
Maley, E. E.,	Barbours,									200		200
Mauch Chunk Y. M. C. A.,	Mauch Chunk,	275	180		230	170		60				915
Millstone Rod and Gun Club,	730 E. Ohio St., Pittsburgh,	1,000	1,000	500	500		100	500		100	100	3,800
Myers, Maggie R.,	New Oxford,	200			200			100	100			600
McNeff, Mrs. C. P.,	Harrisburg,	3,000	3,000	3,000				500	1,000			10,500
McIlhenny, H. M.,	Gettysburg,								5,000			5,000
Neiswender, F. H.,	Pitman,	500			500			2,000	2,000			5,000
Noll, W. H.,	Fleetwood,								500			500
Oliver, Jos. W.,	Lake Carry,	250		100	300	100		100				850
Patterson, C. L.,	Chadds Ford,	300	100	100					100			600
Peffer, P. H.,	Harmony,	200			200				100			500
Penna. Water and Power Co.,	Holtwood,								500	500		1,000
Ramey Water Co.,	Houtsdale,	6,000	2,000			1,000			1,000			10,000
Rawle, Francis,	West End Trust Bldg., Phila.,	1,500			200		200	100	50		100	2,150
Redding, Lawrence,	Snow Shoe,	4,000			2,000			500				6,500
Rudolph, Russel,	Kittanning,	14,000			2,000	1,000		1,000	2,000			20,000
Russel, U. B.,	Coudersport,	2,000						200				2,200
Sachrer, Jos.,	East Mauch Chunk,					50		600	3,200			3,850
Schafer, H. A.,	309 Third Ave., Pittsburgh,								5,000			5,000
Shaffer, D. C.,	White Haven,									200		200
Shaffer, Samuel,	DuBois,									200		200
Shimer, B. L.,	Mt. Airy Park, Bethlehem,	2,500					2,500	500				5,500
South Fork Water Co.,	South Fork,		2,000									2,000
Staley, Seward,	Mont Alto,									200		200
Sterner, Emory,	Codorus,	200		100					1,030			1,330
White Haven Sanitorium,	White Haven,									200		200
Swaine, Delmar,	Renovo,	10,000		5,000	5,000							20,000
Wirt, Chas.,	Germantown,	300			100	100						500
Walters, Franklin,	Stroudsburg,	500			500			200	200			1,400
Wilson, Hugh,	Tidioute,	1,000										1,000
Warriner, S. D.,	Montrose,	100	300	100	100	100						700
Wernersville State Asylum,	Wernersville,						1,000	500	500			2,000
Zion Church, Strausstown,	Strausstown,	700		400	300			400	300			2,100
Totals,		162,675	46,830	29,250	51,980	6,320	6,200	15,360	31,530	3,350	1,800	355,295

TABLE 10.—SEEDLING SHIPMENTS FROM CLEARFIELD NURSERY, PRIVATE PLANTING, 1916.

Species, Age and Number.

Name.	Address.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce, 4 yr.	European Larch, 2 yr.	Honey Locust, 1 yr.	Black Cherry, 1 yr.	Totals.
Albig, E. E.,	West Newton,	300	200						500
Allegheny River Mining Co.,	Kittanning,	5,000							5,000
Bair, G. B. M.,	Newport,	500							500
Bowden, John,	Ashley,	5,500							5,500
Bear Gap Water Co.,	Shamokin,	3,000							3,000
Brush, E. E.,	Canadensis,	500							500
Cattel, H. S.,	1218 Chestnut St., Phila.,	500	500						1,000
Centre Brick and Clay Co.,	Orviston,	2,500	2,500						5,000
Coffin, S. G.,	Bradford,	500							500
Crystal Spring Rod and Gun Club,	Clearfield,	3,000	3.000		2,000				8,000
Cunkleman, Mrs. M. E.,	Livermore,	2,000		1,000					3,000
Earl, G. H., Jr.,	Bryn Mawr,	100,000							100,000
Fleming, H. N.,	Penn Building, Erie,	2,000							2,000
Gates, R. J.,	Mount Alton,	300	200				200		700
Goshen Rod and Gun Club,	Clearfield,	3,000	1,000						4,000
Griffith, T. E.,	Phillipsburg,	2,000							2,000
Guzak, John F.,	St. Benedict,	500							500
Holsopple, F. F.,	621 N. 17th St., Harrisburg,	5,000							5,000
Holsopple, F. O.,	Portage,	250					250		500
Hood, A. B., and J. H. Davidson,	Connellsville,	3,000							3,000
Hummel, A. J.,	Bloomsburg,					2,500			2,500
Hunter, L. L., Estate,	Tidioute,	10,000					1,000		11,000
Johnstown Water Co.,	Johnstown,		5,000						5,000
Kline, Amos,	Clearfield,							200	200
Lehigh University,	South Bethlehem,		500		500		300		1,300
Litzinger, A. E.,	Clearfield,				100	100			200
Ludwig, Charles,	Emporium,	1,000							1,000
Marsh, Zack,	DuBois,	200			200	100			500
Mathers, C. E.,	West Chester,	30.000							30,000
Meadville, City of,	Meadville,	5,000							5,000
Mifflinburg, Borough of,	Mifflinburg,				1,000				1,000
Morrison, S. W.,	Embreeville,	500					1,000		1,500
Mumford, J. L.,	Cambridge Springs, No. 2,						500		500
McCreight, M. I.,	DuBois,	500							500
Nelson, Chas.,	Clearfield,	200	100		100	100			500
New Phila., Borough of,	Silvereek,	*200			200		100		500
Owen, Jas. L.,	White Haven, No. 2,	1,000	1,000				100		2,100
Phillips, John M.,	2227 Jane St., Pittsburgh,							200	200
Richner, Milton,	Clearfield, R. F. D.,	200							200
Roaring Creek Water Co.,	Shamokin,			3,000	3,000				6,000
Rockey, Wm. A.,	Boalsburg,	1,000	500						1,500
Ross, Martin L.,	West Chester, R. F. D.,	200	200				200		600
Rowley, B. E.,	Sugar Grove,	6,000							6,000
Sell, John,	Johnstown,	250	250						500
Shawley, N. W.,	Ligonier,							200	200
South Fork Water Co.,	South Fork,	2,000							2,000
Swaine, John,	Mountain Home,	500							500
Thompson, W. W.,	Coudersport,	500							500
Walker, H. M.,	Wolfs Store,	300	200						500
Williams, I. C.,	Royersford,				25				25
Wilson, J. G.,	Palmyra,	*10	10	10	10	10	10		60
Wolford, H. H.,	Ligonier,	500							500
Totals,		199,200 *210	15,160	4,010	7,135	2,810	3,660	600	232,785

*Four years old.

TABLE 11.—SEEDLING SHIPMENTS FROM GREENWOOD NURSERY. PRIVATE PLANTING, 1916.

Species, Age and Number.

Name.	Address.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce, 2 yr.	Sugar Maple, 1 yr.	White Ash, 1 yr.	Totals.
Allegheny Water Co.,	Altoona, No. 2,	300			100		100	500
Bennett, C. D.,	Ebensburg,	400	200	200		200	200	1,200
Bright, Stanley,	Reading, No. 2,	500	500					1,000
Bright, G. H.,	Reading,				1,000	8,000	8,000	17,000
Brotzman, Monroe,	Easton,	500	200		500			1,200
Brunette, H. L.,	Milford, Box No. 61,	4,200	2,000		2,000			8,200
Bundy, Lasalle,	Coudersport, R. F. D.,	3,000			1,000			4,000
Chambers, J. Paul,	1450 N. 53d St., Phila.,	250			250			500
Coleman Estate,	Mount Gretna,	2,000			1,000			3,000
Curtis, J. A.,	Altoona,				1,000			1,000
Dale, Philip S.,	Oak Hall,	1,800					400	2,200
Earl, G. H., Jr.,	Bryn Mawr,		2,000	2,000	2,000	2,000	2,000	10,000
Eisenbrown, C. S.,	919 N. 3d St., Reading,				5,000			5,000
Eisenbrown, Geo.,	Reading,				1,000			1,000
Elder Ridge Vocational School,	Elder Ridge,	1,000		250	250	100	100	1,700
Friends Hospital,	Frankford,	1,000		1,000		2,500	4,500	9,000
Guyer, J. R.,	Warriors Mark,	1,000	500		500		1,000	3,000
Hendricks, J. F.,	Doylestown,	750			250	200	200	1,400
Horst, Geo. D.,	Reading,				5,000			5,000
Johnstown Water Co.,	Johnstown,	50,000				5,000	5,000	60,000
Kmentt, W. D.,	Renfrew, No. 27,	500	500		500			1,500
Kooser, E. O.,	Somerset,	500		100	500			1,100
Krebs, Margaret W.,	Johnstown,	5,000						5,000
Lillian Home,	Valencia,	2,000				1,000	1,000	4,000
Lincoln, Mrs. Carrie,	Laurelton,				1,100	100	100	1,300
Ludwig, E. E.,	Keating Summit,	1,000						1,000
Moravian Congregation,	Nazareth,	3,000			1,000		1,000	5,000
Murphy, R. W.,	Hawley,	10,800						10,800
McClintock, G. R.,	Oliver Bldg., Pittsburgh,	2,240			1,000			3,240
National Farm School,	Farm School,	1,500	500		1,000	500	500	4,000
Nolde, Jacob,	Reading,		5,000		5,000			10,000
Oak Hill Estate,	Uniontown,	2,000	500	500	500		1,000	4,500
Peters, E. F.,	Bushkill,	2,000						2,000
P. and R. Coal and Iron Co.,	Pottsville,	300			200		100	600
Quimby, Alvin,	Coudersport,	2,000	2,000					4,000
Rhone, Leonard,	Centre Hall,	1,000			1,000			2,000
Ringing Rocks Park,	Pottstown,	45,000	500		500	2,000	2,000	50,000
Robbins, C. Z.,	Bloomsburg,	20,000					2,000	22,000
Sagerman, I. J.,	Mount Carmel,	300			100		100	500
Sailer, M. R.,	Reading,	500						500
Slutter, Oscar,	Stroudsburg,	1,000						1,000
Smedly, Walter,	Media,	1,000	1,000		1,000		1,000	4,000
Sonesville, D. H.,	Chester Springs,	700			300			1,000
Stubbs, J. K.,	West Chester,	2,000						2,000
Table Supply Co.,	Roaring Branch,	500		500				1,000
Thomas, J. A.,	Saltsburg,	500		500		500	500	2,000
Wagner, W. W.,	233 Dock St., Phila.,	2,000			2,000			4,000
Walter, Robert,	Wernersville,	1,000			1,000			2,000
Walker, Harry,	Analomink,	500						500
Totals,		175,540	15,400	5,050	37,550	22,100	30,800	286,440

TABLE 12.—SEEDLING SHIPMENTS FROM MONT ALTO NURSERY. PRIVATE PLANTING, 1916.

Species, Age and Number.

Name.	Address.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Red Pine, 2 yr.	Norway Spruce, 3 yr.	European Larch, 2 yr.	Sugar Maple, 1 yr.	White Ash, 1 yr.	Box Elder, 1 yr.	Totals.
Bailey, W. E.,	Front and S. Sts., Harrisburg,	6,000	2,000				200	2,000	1,850		11,850
Beetem, Chas. G.,	Carlisle,	1,500	500				1,000				2,200
Dept. of Parks and Public Property,	Harrisburg,	10,000	2,000	100			100		1,000		14,000
Dupont, E. M.,	Johnstown,	200	100						100		600
Elder, Irvin C.,	Chambersburg,	4,000	2,000						2,000		8,000
Glasgow Tar Company,	Pottstown,	500	500					100			1,000
Frank, Stoner,	Ephrata,	200	200								500
Gross, Mrs. A. H.,	Langhorne,	500									500
Hinebaugh, W. C.,	Centreville,	2,000					200		200		2,400
Lehigh University,	South Bethlehem,						500		500		1,000
Lincoln, Mrs. Carrie,	Laureltoon,	200									200
Ludwig, W. D.,	Johnstown,	2,000						500			2,500
Machemer, David,	Temple, No. 1,	125				250					500
Mowery, J. W.,	Quarryville,	500									500
McCardle, C. M.,	Quarryville,	1,000							250		1,500
Penna. Water and Power Co.,	Holtwood,	32,300				3,700		2,300			49,050
Retan, Geo. A.,	Mansfield,	300			200	300	200				1,000
Ross, Frank M.,	Honey Brook,	100				100	100			100	600
Sellers, E. J.,	Marysville,	2,000		100					100		2,200
Singer, C. W.,	Dauphin,	500	500						200		1,200
Sober, Martha G.,	Dauphin,	500									500
Weaner, C. C.,	Bendersville,	500									500
Wertz, D. M.,	Waynesboro,	1,700				750					2,450
Totals,		63,625	17,400	1,825	200	5,100	2,300	4,900	6,300	100	104,750
Dixmont Insane Hospital, Dixmont, willow cuttings,											16,000
Barnes, L. G., Centre Hall, privet,											300
Rowland, H. L., Mont Alto, privet,											100
Smith, H. A., Mont Alto, privet,											200

TABLE 13.—SEEDLING SHIPMENTS FROM MONT ALTO NURSERY. PRIVATE PLANTING, BERKS COUNTY CONSERVATION ASSOCIATION, 1916.

Species, Age and Number.

Name.	Address.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Totals.
Ameral, H. B.,	West Leesport,	1,000		1,000
Baver, Elsie,	Hamburg,	1,000		1,000
Berger, Edwin A.,	Wernersville,	1,000		1,000
Bethany Orphans Home,	Womelsdorf,	10,000		10,000
Bright, Mrs. H. M.,	Bernville,	1,000		1,000
Brunner, Stanley,	Krumsville,	1,000		1,000
Burkhart, J. Paul,	Bernville,	500	500	1,000
Dauth, John P.,	18 S. 8th St., Reading,	1,000		1,000
Deen, H. S.,	40 N. 6th St., Reading,	1,000		1,000
Degour, H. F.,	Sinking Spring, No. 1,	500		500
Dept. of Parks and Public Property,	Reading,	100,000	2,000	102,000
Detrich, L. P.,	Kutztown,	5,000		5,000
Domoyer, M. T.,	Kutztown,	400		400
Dubbs, Cyrus,	Myerstown,	1,000		1,000
Eisenbrown, Geo.,	Reading,	5,000		5,000
Eisenbrown, C. S.,	919 N. 3d St., Reading,	10,000	1,000	11,000
Ermentrout, D. G.,	913 Penn St., Reading,	2,000		2,000
Fehr, Horace,	818 N. 11th St., Reading,	1,000		1,000
Fenstermacher, W. E.,	Bowers Station,	1,000		1,000
Fisher, Wm. E.,	541 Court St., Reading,	1,000		1,000
Fleetwood, Borough of,	Fleetwood,	20,000		20,000
Fry, H. M.,	Wyomissing,	500		500
Fox, B. B.,	Lyons Station,	1,000		1,000
Gessler Brothers,	731 Penn St., Reading,	2,000	1,000	3,000
Green, H. D.,	612 Washington St., Reading,	1,000		1,000
Green, H. R.,	612 Washington St., Reading,	23,000	3,000	26,000
Gruber, D. F.,	471 W. Oley St., Reading,	1,000		1,000
Heinley, J. F.,	Albany, Pa.,	1,000		1,000
Heizman, Wm. A.,	Wyomissing,	250	250	500
Heister, T. M.,	Wernersville,	1,000		1,000
Hess, Wm. C.,	322 S. 3d St., Reading,	500		500
Horst, Geo. D.,	Reading,	7,000		7,000
Howerter, Sherman,	40 N. 6th St., Reading,	4,000	2,000	6,000
Jones, R. L.,	Reading,	12,000		12,000
Klapp, D. Y.,	650 Penn St., Reading,	1,000	500	1,500
Klopp, J. H.,	Womelsdorf,	1,000		1,000
Kramer, H. Z.,	Mohnton,	1,000		1,000
Kramer, Lewis & Co.,	Stony Creek Mill,	1,000		1,000
Krum, O. L.,	Wernersville,	1,000		1,000
Kutz, Cosmos D.,	Lyon Station,	1,000		1,000
Lewis, J. E.,	38 N. 11th St., Reading,		500	500
Luden, Wm. H.,	216 N. 8th St., Reading,	2,000		2,000
Massey, F. F.,	Wernersville,	1,000		1,000
Mays, H. R.,	541 Court St., Reading,	3,000		3,000
Mays, J. H.,	Womelsdorf,	6,000		6,000
Mount Penn Gravity Railway Co.,	Reading,	1,000		1,000
Moyer, Francis,	Robesonia,	1,000		1,000
Moyer, J. L.,	462 Centre Ave., Reading,	500		500
Newhard, Lillian R.,	Wyomissing,	250	250	500
Nolde, Jacob,	Reading,	30,000	5,000	35,000
Noll, N. K.,	Fleetwood, No. 1,	500	500	1,000
Rahm, Nicholas M.,	Leesport,	500	500	1,000
Reigel, John H.,	Bernville,	500		500
Reinert, Wm. J.,	Kutztown,	1,000		1,000
Rentz, C. M.,	Sinking Springs, No. 3,	500		500
Rhode, C. J.,	Kutztown,		5,000	5,000
Rick, J. G.,	Bethel,	6,000		6,000
Rick, Geo. A.,	Reading,	3,000	500	3,500
Rothermel, Daniel,	Birdsboro, No. 2,	5,000		5,000
Row, Fred,	138 Clymer St., Reading,	1,000		1,000
Ruth, George,	Wernersville,	1,000		1,000
Schaeffer, Daniel,	Lyon Station,	1,600		1,600
Schofer, J. A.,	Sinking Spring, No. 2,	20,000	1,000	21,000
Schoener, R. E.,	Stouchsburg,	500		500
Schuler, Geo. W.,	Fleetwood, No. 2,	1,000		1,000

TABLE 13.—Continued.

Name.	Address.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Totals.
Sharman, W. E.,	18 N. 4th St., Reading,	6,000		6,000
Sharp, Wm. A.,	1208 Eckert Ave., Reading,	1,000		1,000
Shomo, H. H.,	Mount Penn,	1,000		1,000
Spatz, Jacob T.,	1163 Mulberry St., Reading,	500		500
Spohn, Lewis E.,	Sinking Spring, No. 1,	500		500
Strohecker, H. A.,	737 N. 4th St., Reading,	2,000		2,000
Stump, Walter A.,	Robesonia,	500		500
Stump, Adam D.,	Bernville,	500		500
Stultzfus, H. H.,	Elverson, No. 3,	1,000		1,000
Sunset Hall Co.,	Mount Sunset,	1,000		1,000
Topton Orphans Home,	Topton,	10,000		10,000
Thren, Mrs. E.,	Mount Penn,	1,000		1,000
Wenrich, D. R.,	Wernersville,	2,000	1,000	3,000
Wernersville School District,	Wernersville,	500		500
Wernersville State Asylum,	Wernersville,	20,000	5,000	25,000
Zion's Church,	Strausstown,	3,000	500	3,500
Totals,		362,000	30,000	392,000

Plate 8. This illustration is one of a series which includes Plates 9, 10, and 11. This view shows an area on the Austin Forest before planting. The black spots are stumps.

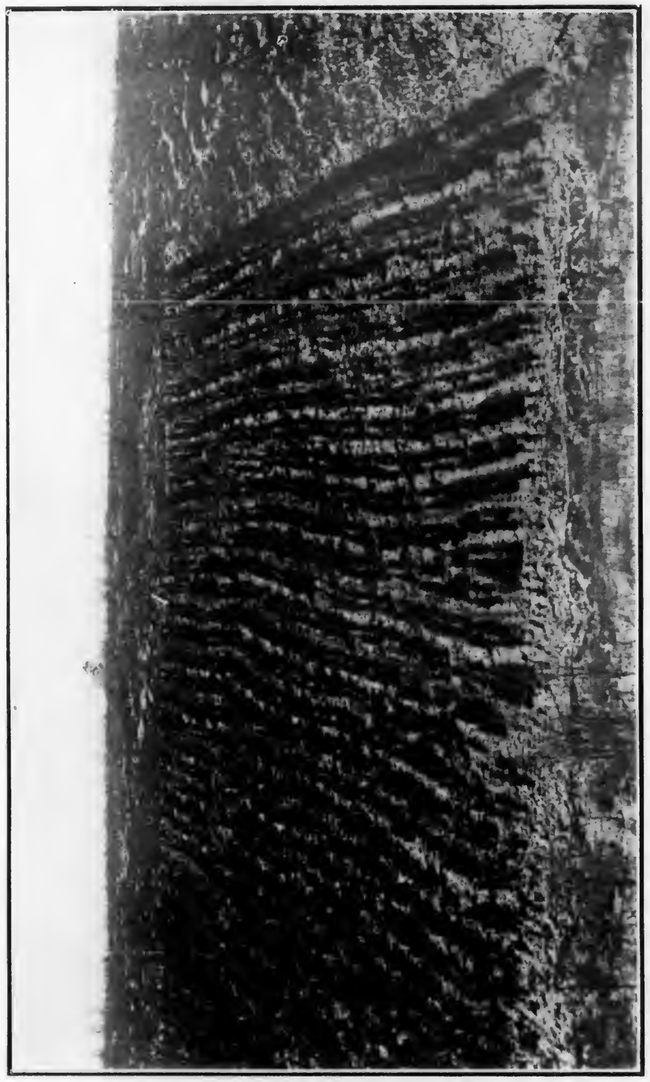

Plate 9. Same area as shown in the preceding illustration, six years after planting. Species used are larch, Norway spruce, and white pine.

TABLE 14.—SEEDLING SHIPMENTS FROM PENFIELD NURSERY. PRIVATE PLANTING, 1916.
Species, Age and Number.

Name.	Address.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce, 2 yr.	Totals.
Bailey, W. D.,	Ulysses,	500			500	1,000
Beitler, A. M.,	No. 750 Bullitt Bldg., Phila.,	500				500
Drum, M. L.,	Lewisburg,	500				500
Goshen Rod and Gun Club.	Clearfield,				1,000	1,000
Guenter, Jos., Jr.,	Coudersport, No. 5,	800	800		800	2,400
Hummel, A. J.,	Bloomsburg,		2,500			2,500
Horning, John,	Penfield,	1,000			500	1,500
Huston, S. F.,	No. 509 Real Est. Trust Bldg., Phila.	1,000			1,000	2,000
Lehigh Valley Coal Co.,	Snow Shoe,				2,000	2,000
Lewis, R. R.,	Coudersport,		10,000			10,000
Lincoln, Mrs. Carrie,	Laurelton,		500			500
Lind, Frank A.,	No. 1601 16th St., Altoona,	800	400	300	500	2,000
Lowell, Thos. J.,	Penfield,	1,000			500	1,500
Mittenberger, W. G.,	No. 41 McKinley Ave., Johnstown.	500				500
Mumford, J. L.,	Cambridge Springs, No. 2,	300		100	200	600
Philips, Edwin S.,	Kennett Square,	2,000			1,000	3,000
Roaring Creek Water Co.	Shamokin,	8,000	4,000		2,000	14,000
Schadenberger, F. H.,	Coudersport,	500	1,000		500	2,000
Schnell, August,	No. 175 N. Fairview, Lock Haven.	500				500
Smith, M. T.,	Penfield,			500		500
Snyder, Chas. W.,	Coburn,	2,000				2,000
Stephens, J. H.,	Johnstown,	13,500	500	500	500	15,000
Turner, P. G.,	Bruin,	2,720	2,720			5,440
Union Outing Club,	DuBois,	2,000				2,000
Vail, Chester,	New Milford,	3,000			3,000	6,000
Woodside, H. L.,	Bigler,	250			250	500
Totals,		41,370	22,420	1,400	14,250	79,440

TABLE 15.—SEEDLING SHIPMENTS FROM SMALL NURSERIES. PRIVATE PLANTING, 1916.
Species, Age and Number.

Name.	Address.	Nursery.	White Pine.		Douglas Fir, 4 yr.	Totals.
			2 yr.	4 yr.		
Bergerhoff, H.,	Canadensis,	Pocono,		150		150
Henry, John,	Canadensis,	Pocono,		30		30
Koehler, Frank,	Stroudsburg,	Pocono,		275		275
Seguine, J. A.,	Cresco,	Pocono,		2,500	50	2,550
Williams, Hon. I. C.,	Royersford,	Pocono,		25	25	50
Warner, Mrs.,	Mt. Pocono,	Pocono,		10		10
Knecht, Jasper,	Cross Forks,	Ole Bull,	500			500
Totals,			500	2,990	75	3,565

Fibre Fabric Co., Railroad, Pa., Blackwell Forest, 1,000 willow cuttings.

TABLE 16.—SUMMARY OF SEEDLING SHIPMENTS FROM STATE FOREST NURSERIES, PRIVATE PLANTING, 1916.
Species, Age, Number and Value.

Name of Nursery.	White Pine.		Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce.			European Larch, 2 yr.	White Ash.		Sugar Maple, 1 yr.	Black Cherry, 1 yr.	Honey Locust, 1 yr.	Elm, 3 yr.	Box Elder.	Totals.
	2 yr.	4 yr.			2 yr.	3 yr.	4 yr.		1 yr.	3 yr.						
Asaph:																
Number,	162,675		446,830	29,250	51,980			6,320		15,360	6,200	3,350	31,530	1,800		355,295
Value,	$244 01		$70 25	$51 19	$77 97			$12 64		$46 08	$15 50	$10 05	$47 30	$5 40		$580 39
Clearfield:																
Number,	199,200	210	15,160	4,010			7,135	2,810				600	3,630			232,785
Value,	$298 80	$0 84	$22 74	$7 02			$24 97	$5 62				$1 80	$5 49			$367 28
Greenwood:																
Number,	175,540		15,400	5,050	37,550				30,800		22,100					286,440
Value,	$263 31		$23 10	$8 84	$56 33				$61 60		$55 25					$468 43
Mont Alto:																
Number,	428,625	*200	47,400	1,825		5,100		2,300	6,300		4,900				100	496,750
Value,	$62 06		$33 63	$2 45	$21 37				$12 60		$12 25				$0 20	$769 33
Penfield:																
Number,	41,370		22,420	1,400	14,250											79,440
Value,	$62 06		$33 63	$2 45	$21 37											$119 51
Pocono:																
Number,		2,990					†75									3,065
Value,		$11 96					$0 30									$12 26
Ole Bull:																
Number,	500															500
Value,	$0 75															$0 75
Total number,	1,007,910	200 3,200	147,210	41,535	103,780	5,100	75 7,135	11,430	37,100	15,360	33,200	3,950	35,190	1,800	100	1,454,275
Total value,	$1,511 87	$0 70 $12 80	$220 82	$72 60	$155 67	$12 75	$0 30 $24 97	$22 86	$74 20	$46 08	$83 00	$11 85	$52 79	$5 49	$0 20	$2,308 95

*Red Pine.
†Douglas Fir.

Mont Alto Nursery,	willow cuttings,	16,000	$12 00
Mont Alto Nursery,	privet cuttings,	600	9 00
Blackwell Forest,	willow cuttings,	1,000	75

TABLE 17.—PRIVATE PLANTING BY COUNTIES, FOR THE YEAR 1916.

Seedlings Furnished by the Department of Forestry.

County.	No. of persons and corporations supplied.	Number of Seedlings.				Total.
		Permanently planted.	Temporary nurseries.	Heeled in or not planted.	Not reported on.	
Adams,	4	7,430				7,430
Allegheny,	3	3,440			5,000	8,440
Armstrong,	2	7,000				7,000
Berks,	109	326,800	59,500	53,100	3,500	442,900
Blair,	5	31,100	22,000		1,000	54,100
Bradford,	1	200				200
Bucks,	5	1,500	4,500		1,900	7,900
Butler,	4	11,440				11,440
Cambria,	10	111,525	125			111,650
Cameron,	1	1,000				1,000
Carbon,	2	915			3,850	4,765
Centre,	12	27,900			6,500	34,400
Chester,	9	3,850	35,500			39,350
Clarion,	1	20,000				20,000
Clearfield,	14	22,800	500			23,300
Clinton,	4	12,700		500		13,200
Columbia,	4	37,200				37,200
Crawford,	3	8,500				8,500
Cumberland,	1	3,600				3,600
Dauphin,	7	25,200		23,850	500	49,550
Delaware,	3	5,100				5,100
Elk,	1		3,800			3,800
Erie,	1	2,000				2,000
Fayette,	2	7,500				7,500
Franklin,	3	13,650				13,650
Huntingdon,	2	8,000				8,000
Indiana,	4	20,000	1,700			21,700
Lackawanna,	2	2,700	2,500			5,200
Lancaster,	5	25,650	500			26,150
Lebanon,	3	60	3,000		600	3,660
Lehigh,	1	1,000	4,500			5,500
Luzerne,	5	20,000	8,000			28,000
Lycoming,	4	2,800				2,800
McKean,	3	3,200				3,200
Mifflin,	1	200				200
Monroe,	13	14,915			500	15,415
Montgomery,	6	51,075	112,150			163,225
Northampton,	4	8,500	4,000			12,500
Northumberland,	4	11,000	16,000			27,000
Perry,	3	1,800	1,100			2,900
Philadelphia,	4	500	33,000			33,500
Pike,	3	10,700				10,700
Potter,	13	82,950				82,950
Schuylkill,	4	3,200			5,000	8,200
Somerset,	2	1,950				1,950
Susquehanna,	2	6,000	700			6,700
Tioga,	4	2,350		800		3,150
Union,	2	3,000				3,000
Warren,	3	18,000				18,000
Wayne,	1	10,800				10,800
Westmoreland,	3	1,200				1,200
Wyoming,	1	850				850
York,	1	29,850				29,850
Totals,	314	1,034,600	313,075	78,250	28,350	1,454,275

TABLE 18.—SEEDLING SHIPMENTS FROM ASAPH NURSERY. STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest.	Forester.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Red Pine, 2 yr.	Norway Spruce, 2 yr.	European Larch, 2 yr.	Sugar Maple, 1 yr.	White Ash, 3 yr.	Honey Locust, 1 yr.	Black Cherry, 1 yr.	Totals.
Austin,	P. H. Fox,		15,000			45,000						60,000
Black Forest,	R. R. Neefe,	141,100	10,000			53,900	5,000					210,000
Blackwells,	J. W. Keller,	170,600	40,000		14,300	62,000						286,900
Caledonia,	R. G. Conklin,					39,400						39,400
Chatham,	T. C. Harbeson,	48,000	1,000			27,000						76,000
Hull,	G. S. Perry,								16,000	21,000		31,000
Medix,	C. E. Zerby,							2,000	2,000	2,000		6,000
New Bergen,	H. C. VanHorn,	100,000		50,500		81,000	5,000			8,500	950	232,450
Ole Bull,	T. H. Golden,	65,400	37,500	15,000		20,000					2,300	151,400
Pine,	H. C. Evans,	50,000				25,000						77,300
Pine Grove,	J. R. Williams,					13,000						13,000
Promised Land,	R. W. Stadden,					20,000						25,000
Sinnemahoning,	H. E. Elliott,		15,000			20,000		5,600		5,000		40,000
Sizerville,	W. B. Evans,	50,000	15,000	9,000								65,000
Stone,	P. H. Mulford,	7,500					2,150					19,650
White Deer,	R. B. Winter,	20,600				10,000		10,000				40,000
Totals,		652,000	133,500	74,500	14,300	416,300	12,150	17,000	12,000	36,500	3,250	1,371,500

TABLE 19.—SEEDLING SHIPMENTS FROM CLEARFIELD NURSERY. STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest.	Forester.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce, 4 yr.	European Larch, 2 yr.	Black Cherry, 1 yr.	Totals.
Black Forest,	R. R. Neefe,	75,000	59,000	1,000				135,000
Buffalo,	A. C. Silvius,	208,000		18,500				226,500
Hull,	G. S. Perry,	115,000	25,000					140,000
Kettle Creek,	M. E. Muller,	100,000						100,000
McElhattan,	J. R. Hogentogler,	108,000	15,000					123,000
Nittany,	L. G. Barnes,	100,000	20,000	20,000		4,500		144,500
Sinnemahoning,	H. E. Elliott,	50,000	5,000					55,000
Stuart,	V. M. Bearer,*	58,000	3,600	4,400	5,300	1,900	1,200	74,400
Grays Run,	A. B. Wells,	27,000						27,000
Totals,		841,000	127,600	43,900	5,300	6,400	1,200	1,025,400

*In addition the following seedlings were lost in transit:

White pine,	21,000
Scotch pine,	20,000
Pitch pine,	14,000
Total,	55,000

Claim was made against the Baltimore & Ohio Railroad Company which settled by reemitting the sum of $97.47.

TABLE 20.—SEEDLING SHIPMENTS FROM GREENWOOD NURSERY. STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest.	Forester.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce, 2 yr.	Sugar Maple, 1 yr.	White Ash, 1 yr.	Totals.
Austin,	P. H. Fox,	150,000*						150,000
Blackwells,	J. W. Keller,		10,000		10,000		10,000	30,000
Buffalo,	A. C. Silvius,				8,900	12,400	12,400	33,700
Greenwood,	T. O. Bietsch,		32,800	52,000		15,000	15,000	114,800
Hopkins,	F. H. Dutlinger,	85,000	30,000	20,000				135,000
Jacks Mountain,	W. J. Bartschat,					8,000		8,000
McClure,	J. L. Witherow,	25,000	10,500					35,500
McElhattan,	J. R. Hogentogler,	73,000	50,500	10,500			3,000	137,000
New Bergen,	H. C. Van Horn,	50,000						50,000
Ole Bull,	T. H. Golden,				20,000			20,000
Pine Grove,	J. R. Williams,	34,500			19,500		6,000	60,000
Promised Land,	R. W. Stadden,	40,000						40,000
Young Womans Cr.	H. F. Critchley,	30,000						30,000
Totals,		487,500	133,800	82,500	58,400	35,400	46,400	844,000

*60,000 of these were thrown away because white mold developed before they could be planted.

In addition to the above 27 Chinese chestnut 1-1-1 transplants were used by T. O. Beitsch for roadside planting.

TABLE 21.—SEEDLING SHIPMENTS FROM MONT ALTO NURSERY. STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest.	Forester.	White Pine, 2 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce, 3 yr.	European Larch.		Totals.
						One year.	Two year.	
Austin,	P. H. Fox,	50,000	35,000		5,000			90,000
Bedford,	W. L. Byers,		5,000					5,000
Black Forest,	R. R. Neefe,	50,000			10,000		5,000	65,000
Blackwells,	J. W. Keller,	49,000						49,000
Buchanan,	A. E. Rupp,			3,500			3,000	6,500
Buffalo,	A. C. Silvius,	174,800						174,800
Caledonia,	R. G. Conklin,	50,000						50,000
Hopkins,	F. H. Dutlinger,						5,000	5,000
Hull,	G. S. Perry,	50,000						50,000
Kettle Creek,	M. E. Muller,	25,000						25,000
Lushbaugh,	W. H. Horning,	25,000						25,000
Minisink,	J. E. Avery,	15,000						15,000
Mont Alto,	L. E. Staley,	50,000	25,000	25,000				100,000
New Bergen,	H. C. Van Horn,	50,000	25,000	25,000				100,000
Nittany,	L. G. Barnes,	25,000						25,000
Ole Bull,	T. H. Golden,	50,000	15,000					65,000
Sinnemahoning,	H. E. Elliott,	30,000	10,000					40,000
Sizerville,	W. B. Evans,	25,000	10,000					35,000
Stuart,	V. M. Bearer,	150,000	10,000			9,000		169,000
Totals,		868,800	110,000	28,500	15,000	9,000	22,600	1,053,900

Medix Forest, C. E. Zerby, 200 California Privet for ornamental planting.

TABLE 22.—SEEDLING SHIPMENTS FROM PENFIELD NURSERY. STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest.	Forester.	White Pine.		Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Norway Spruce.		European Larch, 3 yr.	Totals.
		Two year.	Three year.			Two year.	Three year.		
Buffalo,	A. C. Silvius,			33,000	15,000	40,000			88,000
Caledonia,	R. G. Conklin,	20,000		25,500					45,500
Grays Run,	A. B. Wells,	25,000				13,000			38,000
Kettle Creek,	M. E. Muller,				25,000	50,000			75,000
Lushbaugh,	W. H. Horning,	93,000		20,000		20,000*			133,000
McElhattan,	J. R. Hogentogler,	5,000							5,000
New Bergen,	H. C. Van Horn,			50,000		19,000			69,000
Penfield,	C. L. Kirk,	80,800	5,000	4,200	15,350	23,100	20,000	10,000	158,450
Stuart,	V. M. Bearer,	50,000				25,000			75,000
Totals,		273,800	5,000	132,700	55,350	190,100	20,000	10,000	686,950

*14,400 of these were too small to plant and were placed in transplant beds.

TABLE 23.—SEEDLINGS RAISED IN SMALL FOREST NURSERIES. STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest.	Forester.	White Pine.		Norway Spruce.		European Larch.		Red Pine, 2 yr.	Pitch Pine, 2 yr.	Scotch Pine, 2 yr.		Silver Maple, 1 yr.	Black Cherry, 1 yr.	Totals.
		Two year.	Three year.	Two year.	Three year.	Two year.	Three year.				Three year.			
Lushbaugh,	R. R. Neefe,	86,600							63,300					149,900
Black Forest,	R. C. Conklin,	34,250				2,250		10,250	800	20,200				74,550
Caledonia,	T. O. Harbeson,		1,000				300							1,400
Chatham,	G. S. Perry,	29,500	530*		1,470		40		15,330	27,150†		170	1,090	75,280
Hull,	W. H. Horning,	8,700	1,300						6,400	30,000				16,400
Medix,	C. E. Zerby,	38,000							22,000					90,000
Ole Bull,	T. H. Golden,	63,200							33,000					144,800
Seven Mountains,	W. E. Montgomery,	1,400		6,800			900*		13,000*					15,300
Sinnemahoning,	H. E. Elliott,	6,400												6,400
Snow Shoe,	G. S. Sheeler,	820	500*			5,000			4,320					10,640
Totals,		271,870	3,430	52,400	1,470	7,250	1,240	10,250	158,150	77,350		170	1,090	584,670

All there were planted on the forest where raised except those from Snow Shoe which were planted on Hopkins State Forest.
1150 of them transplants.
*Transplants.

TABLE 24.—WILLOW CUTTING SHIPMENTS FROM STATE FOREST HOLTS. STATE FOREST PLANTING, 1916.

Forest.	Forester.	Lemley.	American Green.	Purple.	Silver Skin.	Totals.
From Mont Alto Nursery.						
Buffalo,	A. C. Silvius,	--------	1,300	3,300	300	4,900
Medix,	C. E. Zerby,	--------	500	--------	--------	500
Penfield,	C. L. Kirk,	--------	5,000	5,000	--------	10,000
Pine Grove,	J. R. Williams,	--------	33,000	--------	4,000	37,000
From Kishacoquillas Forest.						
Pine Grove,	J. R. Williams,	56,550	--------	6,000	--------	62,550
From Blackwell Forest.						
Buffalo,	A. C. Silvus,	6,500*	--------	2,000†	--------	8,500
Pine Grove,	J. R. Williams,	--------	--------	10,000	--------	10,000
Totals,		63,050	39,800	26,300	4,300	133,450

*The original shipment was 14,500, all were in bad condition, the balance were not planted.
†The original shipment was 4,500, all were in bad condition, the balance were not planted.
Besides the above 60,000 more were cut from and planted on the Greys Run Forest.

TABLE 25.—SUMMARY OF SEEDLING SHIPMENTS FROM STATE FOREST NURSERIES, STATE FOREST PLANTING, 1916.

Species, Age, Number and Value.

Name of Nursery.	White Pine. Two year.	White Pine. Three year.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Red Pine, 2 yr.	Norway Spruce. Two year.	Norway Spruce. Three year.	European Larch. Two year.	European Larch. Three year.	White Ash. One year.	White Ash. Three year.	Sugar Maple, 1 yr.	Black Cherry, 1 yr.	Honey Locust, 1 yr.	Totals.
Asaph:															
Number,	652,000	----------	133,500	74,500	14,300	416,300	----------	12,150	--------	--------	12,000	17,000	3,250	36,500	1,371,500
Value,	$978.00	----------	$200.25	$130.38	$50.05	$624.45	----------	$24.30	--------	--------	$36.00	$42.50	$9.75	$54.75	$2,150.43
Clearfield:															
Number,‡	841,000	----------	127,600	43,900	----------	----------	5,300§	6,400	--------	--------	--------	--------	1,200	--------	1,025,400
Value,	$1,261.50	----------	$191.40	$76.83	----------	----------	$18.55	$12.80	--------	--------	--------	--------	$3.60	--------	$1,564.68
Greenwood:															
Number,	487,500*	----------	133,800	82,500	----------	58,400	----------	--------	--------	46,400	--------	35,400	--------	--------	844,000
Value,	$731.25	----------	$200.70	$144.37	----------	$87.60	----------	--------	--------	$92.80	--------	$88.50	--------	--------	$1,345.22
Mont Alto:															
Number,	868,800	----------	110,000	28,500	----------	----------	15,000	22,600	9,000¶	--------	--------	--------	--------	--------	1,053,900
Value,	$1,303.20	----------	$165.00	$49.88	----------	----------	$37.50	$45.20	$13.50	--------	--------	--------	--------	--------	$1,614.28
Penfield:															
Number,	273,800	5,000	132,700	55,350	----------	190,100†	20,000	--------	10,000	--------	--------	--------	--------	--------	686,950
Value,	$410.70	$12.50	$199.05	$96.86	----------	$285.15	$50.00	--------	$35.00	--------	--------	--------	--------	--------	$1,089.26
Small Nurseries:															
Number,	271,870	2,400	77,200	145,150	10,250	52,400	1,470	7,250	340	--------	--------	170	1,090	--------	584,670
	----------	$3.09	$0.38	$29.25	----------	----------	----------	----------	$3.15	--------	--------	----------	----------	--------	----------
Value,	$407.81	$6.00	$115.80	$254.01	$35.88	$78.60	$3.68	$14.50	$1.19	--------	--------	$0.34	$3.27	--------	$956.95
	----------	----------	----------	----------	----------	----------	----------	--------	900§	--------	--------	----------	----------	--------	----------
	----------	1,030§	150§	13,000§	----------	----------	5,300§	--------	9,000¶	--------	--------	170	----------	--------	----------
Total number,	3,394,970	7,400	714,800	429,900	24,550	717,200	36,470	48,400	10,340	46,400	12,000	52,400	5,540	36,500	5,566,420
	----------	----------	----------	----------	----------	----------	----------	--------	$3.15	--------	--------	----------	----------	--------	----------
	----------	$3.09	$0.38	$29.25	----------	----------	$18.55	--------	$13.50	--------	--------	$0.34	----------	--------	----------
Total value,	$5,092.46	$18.50	$1,072.20	$752.33	$85.93	$1,075.80	$91.18	$96.80	$36.19	$92.80	$36.00	$131.00	$16.62	$54.75	$8,720.82

*60,000 of these were thrown away because white mold developed before they could be planted.
†14,000 of these were too small to plant and were placed in transplant beds.
‡In addition the following seedlings were lost in transit: White pine, 2 yr., 21,000; Scotch pine, 2 yr., 20,000; Pitch pine, 2 yr., 14,000.
§Transplants.
¶One year old.

TABLE 26.—STATE FOREST PLANTING FOR THE YEAR 1916.

Number Planted, Area, and Costs.

State Forests and Foresters in Charge.	Number of Plantings Made for: New plantations.	Number of Plantings Made for: Reenforcements.	Number of Seedlings Planted in: New plantations.	Number of Seedlings Planted in: Reenforcements.	Area Treated (Acres): New plantations.	Area Treated (Acres): Reenforcements.	Value of Seedlings for: New plantations.	Value of Seedlings for: Reenforcements.	Cost of Planting for: New plantations.	Cost of Planting for: Reenforcements.	Total Cost of: New plantations.	Total Cost of: Reenforcements.	Average value of seedlings per thousand.	Average cost of planting per thousand.	Cost of Planted Area Per Acre for: New plantations.	Cost of Planted Area Per Acre for: Reenforcements.
Austin, P. H. Fox,	2	--------	240,000	--------	248.8	--------	$365 00	--------	$512 60	--------	$877 60	--------	$1 52	$2 14	$3 53	--------
Bedford, W. L. Byers,	2	--------	5,000	--------	3.3	--------	7 50	--------	45 66	--------	53 16	--------	1 50	9 13	16 11	--------
Black Forest, R. R. Neefe,	1	--------	559,900	--------	567.9	--------	870 93	--------	1,655 94	--------	2,526 87	--------	1 55	2 96	4 45	--------
Blackwells, J. W. Keller,	2	1	360,300	5,000	416.7	4.2	571 55	$10 00	997 14	$14 80	1,568 69	$24 80	1 59	2 77	3 76	$5 90
Buchanan, A. E. Rupp,	1	1	4,800	1,700	8.6	3.0	8 97	3 15	22 95	5 51	31 92	8 66	2 03	4 38	3 71	2 89
Buffalo, A. C. Silvius,	3	--------	523,000	--------	244.5	--------	811 48	--------	1,393 24	--------	2,204 72	--------	1 55	2 66	9 02	--------
Caledonia, R. G. Conklin,	5	--------	209,450	--------	120.5	--------	336 01	--------	669 48	--------	1,005 49	--------	1 60	3 20	8 34	--------
Chatham, T. C. Harbeson,	3	--------	77,400	--------	36.8	--------	117 80	--------	177 37	--------	295 17	--------	1 52	2 29	8 02	--------
Grays Run, A. B. Wells,	15	--------	65,000	--------	30.4	--------	97 50	--------	172 38	--------	269 88	--------	1 50	2 81	8 88	--------
Greenwood, T. O. Bietsch,	9	7	100,800	14,000	70.8	28.9	184 02	23 68	196 03	37 22	380 05	60 90	1 81	2 03	5 37	2 12
Hopkins, F. H. Dutlinger and G. W. Sheeler,	1	--------	150,640	--------	99.8	--------	237 79	--------	982 25	--------	1,220 04	--------	1 57	6 52	12 22	--------
Hull, G. S. Perry,	8	1	294,280	2,000	187.1	.7	464 47	3 00	730 60	4 56	1,195 07	7 56	1 58	2 48	6 39	10 80
Jacks Mountain, W. J. Bartschat,	2	--------	8,000	--------	3.0	--------	20 00	--------	40 70	--------	60 70	--------	2 50	5 09	20 23	--------
Kettle Creek, M. E. Muller,	3	--------	200,000	--------	87.4	--------	306 25	--------	625 36	--------	931 61	--------	1 53	3 13	10 66	--------
Lushbaugh, W. H. Horning,	4	1	149,000	11,000*	106.0	9.7	225 10	17 80	531 83	40 43	756 93	58 23	1 52	3 58	7 14	5 29
McClure, J. L. Witherow,	2	--------	35,500	--------	22.4	--------	53 25	--------	217 08	--------	270 33	--------	1 50	6 11	12 07	--------
McElhattan, J. R. Hogentogler,	2	--------	265,000	--------	132.6	--------	401 63	--------	820 61	--------	1,222 24	--------	1 52	3 09	9 22	--------
Medix, C. E. Zerby,	2	--------	96,000	--------	61.4	--------	154 50	--------	253 85	--------	408 35	--------	1 61	2 64	6 65	--------
Minisink, J. E. Avery,	3	--------	15,000	--------	4.5	--------	22 50	--------	113 72	--------	136 22	--------	1 50	7 58	30 27	--------
Mont Alto, L. E. Staley,	2	--------	100,000	--------	72.8	--------	156 25	--------	364 96	--------	521 21	--------	1 56	3 65	7 16	--------
New Bergen, H. C. Van Horn,	2	--------	411,050	--------	379.5	--------	635 43	--------	1,246 89	--------	1,882 32	--------	1 55	3 63	4 96	--------
Nittany, L. G. Barnes,	4	--------	169,500	--------	91.8	--------	261 50	--------	510 91	--------	772 41	--------	1 54	3 01	8 41	--------
Ole Bull, T. H. Golden,	8	--------	381,200	--------	406.7	--------	586 30	--------	1,174 72	--------	1,761 02	--------	1 54	3 08	4 33	--------

TABLE 26.—Continued.

State Forests and Foresters in Charge.	Number of Plantings Made for		Number of Seedlings Planted in		Area Treated (Acres)		Value of Seedlings for		Cost of Planting for		Total Cost of		Average value of seedlings per thousand.	Average cost of planting per thousand.	Cost of Planted Area Per Acre for	
	New plantations.	Reenforcements.	New plantations.	Reenforcements.	New plantations.	Reenforcements.	New plantations.	Reenforcements.	New plantations.	Reenforcements.	New plantations.	Reenforcements.			New plantations.	Reenforcements.
Penfield, C. L. Kirk,	1	1	147,850	10,600	120.0	8.4	264 21	22 30	299 60	27 75	563 81	50 05	1 81	2 07	4 70	5 95
Pine, H. C. Evans,	2	--------	77,300	--------	53.5	--------	119 40	--------	204 13	--------	323 53	--------	1 54	2 64	6 05	--------
Pine Grove, J. R. Williams,	4	--------	73,000	--------	27.3	--------	112 50	--------	89 25	--------	201 75	--------	1 54	1 22	7 39	--------
Promised Land, R. W. Stadden,	1	--------	65,000	--------	63.8	--------	102 50	--------	146 46	--------	248 96	--------	1 58	2 25	3 90	--------
Seven Mountains, W. E. Montgomery,	1	--------	15,300	--------	12.1	--------	34 50	--------	41 56	--------	76 06	--------	2 25	2 72	6 28	--------
Sinnemahoning, H. E. Elliott,	3	--------	141,400	--------	57.4	--------	212 10	--------	477 33	--------	689 43	--------	1 50	3 38	12 01	--------
Sizerville, W. B. Evans,	1	--------	100,000	--------	95.7	--------	150 00	--------	237 18	--------	387 18	--------	1 50	2 37	4 05	--------
Stone, P. H. Mulford,	1	1	15,950	2,700	6.6	1.2	26 58	4 72	68 72	8 70	95 30	13 42	1 68	4 15	14 44	11 18
Stuart, V. M. Bearer,	3	--------	318,400	--------	189.7	--------	492 05	--------	1,096 60	--------	1,588 65	--------	1 55	3 44	8 37	--------
White Deer, R. B. Winter,	1	--------	40,000	--------	61.8	--------	70 00	--------	168 46	--------	238 46	--------	1 75	4 21	3 86	--------
Young Womans Creek, H. F. Critchley,	1	--------	30,000	--------	14.9	--------	45 00	--------	216 67	--------	261 67	--------	1 50	7 22	17 56	--------
Totals and averages,	105	13	5,445,620	47,000	4,106.1	56.1	$8,524 57	$84 65	$16,502 23	$138 97	$25,026 80	$223 62	$1 57	$3 03	$6 10	$3 99

*Reenforcing of natural growth.
NOTE: The average number of trees planted per acre was 1,326.

TABLE 27.—STATE FOREST PLANTING, 1916.

Species, Age and Number.

Forest and Forester.	White Pine.		Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Red Pine, 2 yr.	Norway Spruce.		European Larch.		White Ash.		Sugar Maple, 1 yr.	Black Cherry, 1 yr.	Honey Locust, 1 yr.	Totals.
	2 yr.	3 yr.				2 yr.	3 yr.	2 yr.	3 yr.	1 yr.	3 yr.				
Austin, P. H. Fox,	*140,000	--------	50,000	--------	--------	45,000	5,000	--------	--------	--------	--------	--------	--------	--------	240,000
Bedford, W. L. Byers,	--------	--------	5,000	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	5,000
Black Forest, R. R. Neefe,	352,700	--------	69,000	64,300	--------	53,900	10,000	10,000	--------	--------	--------	--------	--------	--------	559,900
Blackwells, J. W. Keller,	219,000	--------	50,000	--------	14,300	72,000	--------	--------	--------	10,000	--------	--------	--------	--------	365,300
Buchanan, A. E. Rupp,	--------	--------	--------	3,500	--------	--------	--------	3,000	--------	--------	--------	--------	--------	--------	6,500
Buffalo, A. C. Silvius,	382,800	--------	33,000	33,500	--------	48,900	--------	--------	--------	12,400	--------	12,400	--------	--------	523,000
Caledonia, R. G. Conklin,	104,250	--------	45,700	800	10,250	46,200	--------	2,250	--------	--------	--------	--------	--------	--------	209,450
Chatham, T. C. Harbeson,	48,000	1,100	1,000	--------	--------	27,000	--------	--------	300	--------	--------	--------	--------	--------	77,400
Grays Run, A. B. Wells,	52,000	--------	--------	--------	--------	13,000	--------	--------	--------	--------	--------	--------	--------	--------	65,000
Greenwood, T. O. Bietsch,	--------	--------	32,800	52,000	--------	--------	--------	--------	--------	15,000	--------	15,000	--------	--------	114,800
Hopkins, F. H. Dutlinger,	85,820	[1]500	30,000	24,320	--------	--------	--------	10,000	--------	--------	--------	--------	--------	--------	150,640
Hull, G. S. Perry,	194,500	[1]530	[2]52,000	15,330	--------	--------	1,470	--------	40	--------	10,000	[6]170	1,090	21,000	296,280
Jacks Mountain, W. J. Bartschat,	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	8,000	--------	--------	8,000
Kettle Creek, M. E. Muller,	125,000	--------	--------	25,000	--------	50,000	--------	--------	--------	--------	--------	--------	--------	--------	200,000
Lushbaugh, W. H. Horning,	126,700	1,300	20,000	6,400	--------	†5,600	--------	--------	--------	--------	--------	--------	--------	--------	160,000
McClure, J. L. Witherow,	25,000	--------	10,500	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	35,500
McElhattan, J. R. Hogentogler,	186,000	--------	65,500	10,500	--------	--------	--------	--------	--------	3,000	--------	--------	--------	--------	265,000
Medix, C. E. Zerby,	38,000	--------	30,000	22,000	--------	--------	--------	--------	--------	--------	2,000	2,000	--------	2,000	96,000
Minisink, J. E. Avery,	15,000	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	15,000
Mont Alto, L. E. Staley,	50,000	--------	25,000	25,000	--------	--------	--------	--------	--------	--------	--------	--------	--------	--------	100,000
New Bergen, H. C. VanHorn,	200,000	--------	50,000	50,500	--------	100,000	--------	9,600	--------	--------	--------	--------	950	--------	411,050
Nittany, L. G. Barnes,	125,000	--------	20,000	20,000	--------	--------	--------	4,500	--------	--------	--------	--------	--------	--------	169,500
Ole Bull, T. H. Golden,	181,600	--------	52,500	48,000	--------	85,600	--------	5,000	--------	--------	--------	--------	--------	8,500	381,200
Penfield, C. L. Kirk,	80,800	5,000	4,200	15,350	--------	23,100	20,000	--------	10,000	--------	--------	--------	--------	--------	158,450
Pine, H. C. Evans,	50,000	--------	--------	--------	--------	25,000	--------	--------	--------	--------	--------	--------	2,300	--------	77,300
Pine Grove, J. R. Williams,	34,500	--------	--------	--------	--------	32,500	--------	--------	--------	6,000	--------	--------	--------	--------	73,000
Promised Land, R. W. Stadden,	40,000	--------	--------	--------	--------	20,000	--------	--------	--------	--------	--------	5,000	--------	--------	65,000
Seven Mountains, W. E. Montgomery.	1,400	--------	--------	[3]13,000	--------	--------	--------	--------	[1]900	--------	--------	--------	--------	--------	15,300

MISSING

PAGES

TABLE 27.—Continued.

Forest and Forester.	White Pine. 2 yr.	White Pine. 3 yr.	Scotch Pine, 2 yr.	Pitch Pine, 2 yr.	Red Pine, 2 yr.	Norway Spruce. 2 yr.	Norway Spruce. 3 yr.	European Larch. 2 yr.	European Larch. 3 yr.	White Ash. 1 yr.	White Ash. 3 yr.	Sugar Maple, 1 yr.	Black Cherry, 1 yr.	Honey Locust, 1 yr.	Totals.
Sinnemahoning, H. E. Elliott,	86,400		30,000			20,000								5,000	141,400
Sizerville, W. B. Evans,	75,000		25,000												100,000
Stone, P. H. Mulford,	7,500			9,000				2,150							18,650
Stuart, V. M. Bearer,	258,000		13,600	4,400		25,000	[4]5,300	1,900	[5]9,000				1,200		318,400
White Deer, R. B. Winter,	20,000					10,000						10,000			40,000
Young Womans Creek, H. F. Critchley.	30,000														30,000
Totals,	3,334,970	[1]1,030 7,400	[2]150 714,800	[3]13,000 429,900	24,550	702,800	[4]5,300 36,470	48,400	[1]900 10,340 [5]9,000	46,400	12,000	[6]170 52,400	5,540	36,500	5,492,020
Costs,	$5,002 46	$3 09 $18 50	$0 38 $1,072 20	$29 25 $752 33	$85 93	$1,054 20	$18 55 $91 18	$96 80	$3 15 $36 19 $13 50	$92 80	$36 00	$0 34 $131 00	$16,62	$54 75	$8,609 22

*Originally 200,000—60,000 were thrown away because white mold developed before they could be planted.
†Originally 20,000—14,400 were too small to plant and were placed in transplant beds.
[1]2-1 yr. [2]Also 150 Scotch pine, 1-2 yr. [3]1-1 yr. [4]Four years old. [5]One year old. [6]Silver maple.

TABLE 28.—STATE FOREST PLANTING FOR THE YEAR 1916. WILLOW CUTTINGS:—Holts.

State Forests and Foresters in Charge.	Species and Number. Lemley.	American Green.	Purple.	Silver Skin.	Total number.	Value of cuttings.	Cost of planting.	Total cost.	Cost per 100 sq. ft.
Buffalo, A. O. Silvius,	6,500	1,200	5,300	300	13,400	$10 05	$33 07	$46 12	$.33
Medix, C. E. Zerby,	------	500	------	------	500	38	4 25	4 63	.77
Penfield, C. L. Kirk,	------	5,000	5,000	------	10,000	7 50	20 00	27 50	.13
Pine Grove, J. R. Williams,	50,550	33,000	16,000	4,000	103,550	82 16	91 15	173 31	.17
Totals and averages,	63,050	39,800	26,300	4,300	133,450	$100 09	$151 47	$251 56	$.18+

TABLE 29.—SEEDLING SHIPMENTS TO INDIVIDUALS, 1917.

County and Name.	Nursery.	White Pine.				Scotch Pine.			Pitch Pine.	Norway Spruce.		
		2.	3.	2-2.	Misc.	2.	3.	3-2.	2.	2.	3.	Transplants.
Adams:												
Hoffman, E. N.,	Mont Alto,	1,000										
Smith, G. F.,	Mont Alto,	1,000										
Williams, J. L.,	Mont Alto,		8,000			2,000			500			
Allegheny:												
Bartberger, C. M.,	Mont Alto,		500									
Brown, Mrs. J. D.,	Mont Alto,		800			100						
Ferla, Henry,	Mont Alto,		500			200			300			
Grall, Mrs. M.,	Clearfield,	2,000										
Haysville Water Co.,	Clearfield,					400			400			
Haysville Water Co.,	Mont Alto,		9,000									
Lockard, C. R.,	Asaph,	500										
Lockhart, J. H.,	Mont Alto,	1,000				500			500			
McAleer, B.,	Clearfield,	300				200						
Mason, Mrs. M. F.,	Mont Alto,	1,000				500			500			
Mathews, F. V.,	Mont Alto,	1,000										
Thorn Hill School,	Clearfield,	2,000										
Walker, Wm.,	Clearfield,											
Walker, Wm.,	Mont Alto,		2,000			500			500			
Western Penitentiary,	Clearfield,											
Western Penitentiary,	Greenwood,											
Western Penitentiary,	Mont Alto,		5,000			5,000					2,000	
Beaver:												
Mackall, R. C.,	Greenwood,										5,000	
Wagner, Mrs. B.,	Asaph,	3,500									2,000	
Berks:												
Althouse, C. S.,	Greenwood,		100			200						
Bethany Orphans Home,	Mont Alto,	860				400						
Borough of Fleetwood,	Clearfield,					25,000			5,000			
Bright, G. H.,	Asaph,				250		650					1,000
Bright, G. H.,	Greenwood,											
City of Reading,	Asaph,											
Faust, F. S.,	Mont Alto,		1,000			1,000					1,000	
Fritz, S. H.,	Mont Alto,	3,000				2,000						
Galen Mountain Co.,	Clearfield,		2,500			2,000						

Mendel, Jos.,	Mont Alto,		900			300						
Nolde, Jacob, Est.,	Clearfield,											
Nolde, Jacob, Est.,	Greenwood,					2,000						2,000
Nolde, Jacob, Est.,	Mont Alto,		5,000			2,500					7,500	
Rick, J. G.,	Clearfield,								1,000			
Rick, J. G.,	Mont Alto,		5,000			2,000						
Rutter, W. M., Est.,	Mont Alto,		1,800									
Snyder, E. G.,	Clearfield,	3,000										
State Asylum,	Clearfield,					2,400						
State Asylum,	Mont Alto,	4,900							500			
Windsor Water Co.,	Clearfield,		13,600									
Blair:												
Allegheny Water Co.,	Clearfield,										500	
Allegheny Water Co.,	Greenwood,											
Bald Eagle Water Co.,	Clearfield,											
Bald Eagle Water Co.,	Mont Alto,		18,000			5,000						
Blair Co. G. F. & For. Assoc.,	Mont Alto,	10,000				10,000						
Davis, T. S.,	Mont Alto,	2,700										
Dively, Mrs. M.,	Mont Alto,	600				100			100			
Hicks, Mrs. J. F.,	Clearfield,	1,500							1,500			
Bradford:												
McDonald, D.,	Asaph,	1,000									500	
Lee, C. C.,	Mont Alto,		500									
Lowry, W. N.,	Asaph,				1,000	200						300
Shadduck, J. B.,	Clearfield,	11,800				11,800						
Bucks:												
Claxton, T. B.,	Mont Alto,	500										
Durns, S. H.,	Mont Alto,	500										
Harkins, G. W., Jr.,	Mont Alto,		700			400			300			
Hendricks, J. F.,	Mont Alto,		3,000			2,000			1,500			
Kindred, C. F.,	Clearfield,											
Kindred, C. F.,	Greenwood,					600						
Kindred, C. F.,	Mont Alto,	6,000				6,000						
Stuckert, W. R.,	Greenwood,											
Stuckert, W. R.,	Mont Alto,		400						400			
Cambria:												
Cambria Min. & Mfg. Co.,	Clearfield,	45,000				10,000						
Cambria Min. & Mfg. Co.,	Greenwood,											
Cambria Iron Co.,	Asaph,						200					
Ebensburg Coal Co.,	Clearfield,	5,000				5,000						
Hahn, J. L.,	Clearfield,	1,000				500			500			
Johnstown Water Co.,	Asaph,	5,000	5,000			15,000	5,000					
Portage Water Co.,	Clearfield,	10,000				3,600			1,000			
South Fork Water Co.,	Mont Alto,		3,000			2,000						
State Dept. of Health,	Clearfield,											
State Dept. of Health,	Mont Alto,	5,000				2,000			1,000			
Thomas, J. O.,	Greenwood,	2,500				500						
Weston, W. H.,	Clearfield,	500										

TABLE 29.—Continued.

County and Name.	Nursery.	White Pine.				Scotch Pine.			Pitch Pine.	Norway Spruce.		
		2.	3.	2-2.	Misc.	2.	3.	3-2.	2.	2.	3.	Transplants.
Carbon:												
Honey Brook Water Co.,	Clearfield,	10,000				3,000						
Honey Brook Water Co.,	Mont Alto,		8,000									
Muller, Adolph,	Clearfield,		9,000			5,000			5,000			
Panther Valley Water Co.,	Mont Alto,		20,000			5,000					5,000	
Centre:												
Durst, Samuel,	Asaph,		1,500									
Grove, F. C.,	Clearfield,	5,500				1,000						
Hoy, H. N.,	Mont Alto,			500								
Lehigh Valley Coal Co.,	Mont Alto,		30,000			15,000			15,000			
Luse, C. W.,	Mont Alto,		1,000			500			500			
Musser, Dr. C. S.,	Greenwood,		500									
Musser, E. N.,	Mont Alto,		1,500							500		
Orndorf, I. M.,	Clearfield,		15,000									
Ramey Water Co.,	Clearfield,	11,000				5,000					3,000	
Weaver, L. L.,	Mont Alto,	10,000										
Chester:												
Baugh, Miss M.,	Greenwood,		1,000			1,000			500		1,000	
Baugh, Miss M.,	Mont Alto,		300									
Crossan, W. H., & Son,	Clearfield,											
Davis, Miss A. J.,	Asaph,	500										
Esherick, W. H.,	Mont Alto,	400										
Great Bear Tract,	Asaph,											
Great Bear Tract,	Greenwood,										2,000	
Great Bear Tract,	Mont Alto,		2,000			2,000						
Gruber, I. W.,	Mont Alto,		6,000			2,500					500	
Hayman, E. B.,	Greenwood,		500			500						
Jaquette, I. G.,	Mont Alto,		1,000			500						
Ketler, W. H.,	Mont Alto,		3,500								500	
Lewis, Mrs. M. P.,	Greenwood,											
Morse, N. K.,	Clearfield,		1,000			1,000			500			
Morse, N. K.,	Greenwood,											
Sharples, P. M.,	Clearfield,	17,000				4,000						
Sharples, P. M.,	Greenwood,						1,000					
Taylor, R. S.,	Mont Alto,	1,000							500		500	
Westtown School,	Clearfield,	10,000								5,000		
Clarion:												
Collner, H. C.,	Greenwood,											
Collner, H. C.,	Mont Alto,		1,000									
Fox Estate,	Clearfield,	10,000									2,500	
Fox Estate,	Mont Alto,		10,000									
Harvey Brothers,	Clearfield,	5,000									2,500	
Harvey Brothers,	Mont Alto,		5,000									
Porterfield, Mrs. H. H.,	Clearfield,	5,000				5,000			5,000			
Clearfield:												
Arnold, W. D.,	Greenwood,			200		100						100
City of DuBois,	Greenwood,			1,900			150				8,400	
Crystal Spring Club,	Clearfield,					500						
DuBois Hospital,	Greenwood,	500									500	
General Refractories Co.,	Clearfield,		500									
McCreight, M. I.,	Clearfield,					500						
Palmgren, E. J.,	Asaph,											
Straw, Harrison,	Clearfield,	200				100						
Swope, Mrs. E. V.,	Clearfield,		1,000									
Woodside, H. L.,	Clearfield,		700									
Clinton:												
Bowden, John,	Clearfield,	10,000										
Calhoun, A. G.,	Mont Alto,		15,000									
Steele, Chas.,	Clearfield,	5,000	2,000			5,000			2,000			
Steele, Chas.,	Greenwood,										3,000	
Columbia:												
Hess, J. B.,	Mont Alto,	2,000				1,000						
Petro, John,	Mont Alto,	2,800							2,700			
Robbins, C. Z.,	Asaph,											
Wagner, Mrs. D. E.,	Mont Alto,		900								100	
Welliver, Dr. G. H.,	Asaph,		1,000				700					
Crawford:												
Campbell, J. T.,	Mont Alto,	1,500										
Mumford, J. L.,	Mont Alto,		300								300	
Stelle, C. A.,	Asaph,		300									
Cumberland:												
Addams, C. P.,	Asaph,	25										
Beetem, C. G.,	Asaph,											
Beetem, C. G.,	Mont Alto,		2,300			600					400	
Bliss, R. P.,	Mont Alto,		3,000									
Dauphin:												
Bogner, I. F.,	Mont Alto,	3,000				3,000						
Dept. of Forestry,	Asaph,					200						
Dept. of Forestry,	Greenwood,			200								400
Dept. of Forestry,	Pocono,				100			100				
Dept. of Forestry,	Penn,											
Knapp, W. E.,	Mont Alto,		500			200					300	
Shenk, A. B.,	Greenwood,	1,500										
Wiest, W. W.,	Mont Alto,		200								500	

TABLE 29.—**Continued.**

County and Name.	Nursery.	White Pine.				Scotch Pine.			Pitch Pine.	Norway Spruce.		
		2.	3.	2-2.	Misc.	2.	3.	3-2.	2.	2.	3.	Transplants.
Delaware:												
Crowell, S. B.,	Greenwood,										200	
Crowell, S. B.,	Mont Alto,	600				300			400			
Gray, W. S.,	Clearfield,		1,600			500						
Riddle, S. D.,	Clearfield,	2,000				1,000						
Ross, Rev. M. L.,	Mont Alto,	500				500					500	
Wood, L. H.,	Mont Alto,		500									
Elk:												
Brockway Crystal Ice Co.,	Greenwood,	500										500
Charleroi Mountain Club,	Asaph,											
Charleroi Mountain Club,	Mont Alto,		16,000			2,000			1,000		1,000	
Elk Fire Brick Co.,	Clearfield,	4,100	900			5,000						
Lipsey, Thomas,	Mont Alto,	600										
St. Marys Water Co.,	Clearfield,		25,000			10,000			5,000		10,000	
Erie:												
Brown, W. S.,	Greenwood,		300			200						
Mayer, Henry Est.,	Clearfield,		1,000			500						
St. Marys College,	Asaph,		6,000			3,000			2,000			1,000
St. Marys College,	Greenwood,											
Fayette:												
American Man. & Mfg. Co.,	Clearfield,	2,000				2,000			2,000			
American Man. & Mfg. Co.,	Greenwood,											
Whipkey, W. L.,	Mont Alto,		500									
Forest:												
Anderson, J. P.,	Mont Alto,		500									
Franklin:												
Benchoff, L. F.,	Mont Alto,		1,500			500						
Lyons, Jos.,	Greenwood,		500									
Miller, C. C.,	Clearfield,											
Miller, C. C.,	Mont Alto,		2,000			2,000			1,000		1,000	
Myers, S. J.,	Mont Alto,		1,200									
Myers, B. C.,	Mont Alto,	3,000				1,000			1,000			
Oellig, J. B.,	Mont Alto,	2,000				2,000						
Greene:												
Scott, Bert,	Mont Alto,	300									500	

Huntingdon:												
Indiana Bear Club,	Greenwood,		3,000			2,000						
Indiana:												
Cunkelman, Mrs. Geo.,	Mont Alto,	2,000				1,000						
Harris, Thos.,	Mont Alto,	500										
Marshall, T. D.,	Asaph,	500					500					
Munshower, Mrs. S. S.,	Greenwood,			500								
Thomas, J. A.,	Clearfield,		2,000						300			
Wagner, Clyde,	Clearfield,		3,000									
Jefferson:												
Elliott, Hon. S. B.,	Clearfield,	50				100				100		
Jordan, C. B.,	Mont Alto,	1,000										
McCreight, J. M.,	Greenwood,											
Juniata:												
Burns, S. H.,	Mont Alto,	2,000									500	
Zimmerman, D. A.,	Mont Alto,	1,000										
Lackawanna:												
Benjamin, A. P.,	Clearfield,	10,000										
Crossman, A. W.,	Greenwood,		4,000			1,000						
Whitmore, A. L.,	Asaph,	2,000										
Whitmore, D. C.,	Asaph,	2,500									300	
Lancaster:												
Detweiler, Dr. T. C.,	Mont Alto,	3,000				500						
Lancaster E. L. H. & P. Co.,	Mont Alto,					1,000					200	
Masonic Home,	Asaph,						500					
Oldweiler, Horace,	Mont Alto,				100	200						
Penna. Water & Power Co.,	Asaph,		3,900				2,500				1,600	
Shirk, E. M.,	Clearfield,		300									
Slaymaker, S. R.,	Clearfield,											
Slaymaker, S. R.,	Greenwood,		4,000									3,000
Lebanon:												
Penna. Chautauqua,	Clearfield,					500						
Lehigh:												
Adams, J. G.,	Mont Alto,	500										
Luzerne:												
Black Diamond Powder Co.,	Mont Alto,	1,000							500			
Dallas Water Co.,	Clearfield,	3,000										
Hess, L. E.,	Mont Alto,		4,000			2,000						
Hummel, A. J.,	Clearfield,					5,000						
Hummel, A. J.,	Greenwood,										5,000	
Luzerne Co. Indust. School,	Clearfield,	6,000										
Luzerne Co. Indust. School,	Mont Alto,		6,000			3,000					1,400	
Wyoming Valley Water Supply Co.,	Mont Alto,		30,000									
Lycoming:												
Duffy, S. T.,	Clearfield,	1,000										
Dunwoody, F. & G. Club,	Asaph,	2,000										
Graham, H. T.,	Clearfield,	1,000				1,000						
Hardt, Dr. A. F.,	Mont Alto,		1,000									
Highland Orchard Co.,	Mont Alto,	5,000	4,000									
Kurtz, J. C.,	Asaph,											500

TABLE 29.—Continued.

County and Name.	Nursery.	White Pine.				Scotch Pine.			Pitch Pine.	Norway Spruce.		
		2.	3.	2-2.	Misc.	2.	3.	3-2.	2.	2.	3.	Transplants.
Lamade, A. C.,	Mont Alto,	1,000										
Searborough, Mrs. L. J.,	Clearfield,	2,000										
Ulmer, L. J.,	Asaph,				400							
Williamsport Water Co.,	Mont Alto,	18,000				9,300						
McKean:												
Hogarth, Ostrander & Co.,	Asaph,		5,000			5,000						
Mt. Jewett Water Co.,	Mont Alto,		500									
Smith, S. W.,	Asaph,		10,000			10,000					7,000	
Ventres, W. R.,	Greenwood,		2,000									
Mercer:												
Ball, A. E.,	Asaph,		700			300						
Miller, S. C.,	Clearfield,		500			200						
Steiner & Oswald,	Asaph,				1,500							
Monroe:												
Barry, Oran,	Clearfield,	1,000										
Biggs, G. N.,	Greenwood,		500								300	
Brewer, W. H.,	Mont Alto,		700									
Buck, Casper,	Mont Alto,		500									
Everitt, E. H.,	Asaph,				500							
Fisher, W. R.,	Pocono,				500							
Heller, H. E.,	Pocono,				2,000							
Hoffman, L. S.,	Asaph,		2,000						500		500	
Karch, J. W.,	Clearfield,	500										
Lamb, W. D. Est.,	Mont Alto,		300			200						
Lester, G. R.,	Pocono,				500							
Lynch, T. M.,	Greenwood,					300			200		300	
Lynch, T. M.,	Mont Alto,	500				300						500
P. O. S. of A., Mt. Home,	Greenwood,			3,000		500					500	
Rhoads, A. L.,	Clearfield,	500										
Starner, G. F.,	Mont Alto,	1,200				5,000			5,000			
Tobyhanna Creek Ice Co.,	Clearfield,	6,000										
Van Allen, C. E.,	Asaph,	1,000										
Wagner, G. E.,	Greenwood,					500					500	
Wilson, Edgar,	Mont Alto,		1,000			500					500	
Wirt, C. H.,	Greenwood,											

Montgomery:												
Borough of Norristown,	Clearfield,		300			100			100			
Cooke, G. J.,	Mont Alto,		1,500								500	
Ehrgood, E. E.,	Greenwood,		500								500	
Fisher, C. W.,	Mont Alto,		600			200			200			
Johnson, J. A.,	Mont Alto,					500						
Keffer Karl,	Clearfield,		300									
Moyer, A. M.,	Clearfield,	700				300						
Northampton:												
Bangor Water Co.,	Clearfield,											
Bangor Water Co.,	Greenwood,					4,000			3,000			
Bangor Water Co.,	Mont Alto,	12,000							2,000			
Blue Ridge Water Supply Co.,	Clearfield,											
Blue Ridge Water Supply Co.,	Mont Alto,	12,000				4,000						
City of Easton,	Clearfield,	12,000				4,000			3,000			
Lehigh University,	Clearfield,		3,000								3,000	
Lehigh University,	Greenwood,										200	
Moorestown Salem Union Ch.,	Asaph,	200										
Northumberland:												
Bowden, John,	Clearfield,	2,000									500	
Fairchilds, A. A.,	Mont Alto,		1,000			400						
Kieffer, G. P.,	Clearfield,	700					500				500	
Kline, J. S.,	Asaph,		500		500	500						
Mt. Carmel Water Co.,	Asaph,					500						
Mt. Carmel Water Co.,	Mont Alto,	500										
White Deer Water Co.,	Clearfield,	2,000										
White Deer Water Co.,	Mont Alto,		10,000									
Perry:												
Bair, G. B. M.,	Mont Alto,	500									300	
Hardt, C. W.,	Mont Alto,		200			5,000			1,000		1,000	
Wittenmyer, S.,	Mont Alto,		7,000									
Pike:												
Knupp, Jacob,	Clearfield,	10,000										
Shepherd, Thos.,	Clearfield,	800				100						
Potter:												
A. A. S. R. Bodies,	Asaph,		200				200					
Austin, A. F.,	Mont Alto,	2,000										
Austin, R. S.,	Mont Alto,	1,400										
Borough of Austin,	Mont Alto,		1,000			500						
Bundy, J. B.,	Mont Alto,		500									
Earle, E. A.,	Mont Alto,		2,800								2,500	
Galeton Industrial Union,	Asaph,		2,500				2,500					
Grabe, T. A.,	Asaph,		300									200
Glassmire, D. F.,	Asaph,		700									
Guenter, J., Jr.,	Asaph,											
Hall, Clyde,	Clearfield,		1,000			500						
Hollenbeck, O. B.,	Mont Alto,	2,000									1,000	
Jones, A. F.,	Greenwood,					1,500						
Consolidated Water Co.,	Clearfield,								4,000		2,000	
Consolidated Water Co.,	Mont Alto,		8,000			4,000						

TABLE 29.—Continued.

County and Name.	Nursery.	White Pine.				Scotch Pine.			Pitch Pine.	Norway Spruce.		
		2.	3.	2-2.	Misc.	2.	2.	3-2.	2.	2.	3.	Transplants.
Lewis, R. R.,	Asaph,					2,000			1,000			
Lewis, R. R.,	Greenwood,										1,200	
Lockwood, J. A.,	Clearfield,		3,000									
Mette, Sophia,	Mont Alto,	13,000										
Nuschke, Louis,	Mont Alto,	4,000										
Quimby, Alvin,	Greenwood,			2,000								
Rees, O. A.,	Clearfield,	600							400			
Shadenberger, F. A.,	Clearfield,											
Snyder, J. M.,	Greenwood,		4,000									
Stuckey, Isaac,	Asaph,											
Tyler, C. E.,	Clearfield,		10,000									
Schuylkill:												
Citizens Water Co.,	Mont Alto,		4,000			2,000						
Daddow, T. R.,	Clearfield,											
Daddow, T. R.,	Greenwood,											
Daddow, T. R.,	Mont Alto,		2,500			5,000					8,000	
Girard Water Co.,	Mont Alto,	20,000				20,000						
Glick, Mrs. A. H.,	Clearfield,											
Heim, G. F.,	Mont Alto,	500										
Kaufman, C. M.,	Mont Alto,					200					1,000	
Phila. & Reading Coal & Iron Co.,	Asaph,				2,000	600			600			200
Phila. & Reading Coal & Iron Co.,	Greenwood,										500	
Snyder:												
Boyer, J. C.,	Clearfield,											
Boyer, J. C.,	Mont Alto,		3,000			1,000						
Hetrick, J. H.,	Clearfield,	5,500				2,000						
Kline, W. H.,	Greenwood,			500								
Rigel, J. W.,	Greenwood,			3,000								
Somerset:												
Brant, F. J.,	Mont Alto,	500				500						
Miltenberger, W. G.,	Mont Alto,					500						
Windber Water & Power Co.,	Mont Alto,		1,500			500						
Susquehanna:												
Vail, C. S.,	Asaph,					1,000					1,000	
Wyalusing Dist. Camp Ground,	Asaph,											
Tioga:												
Austin, S. C.,	Asaph,		500									
Blackwell, S. X.,	Asaph,		3,000									
Campbell, J. D.,	Mont Alto,	2,500									2,500	
Fick, H. J.,	Asaph,		1,000									
Gross, H. A.,	Asaph,		2,000									
Vermilyea, C. E.,	Asaph,								500		300	
Wood, C. M.,	Asaph,	300										
Union:												
Dauberman, F. P.,	Mont Alto,	300				200						
Libby, W. H.,	Mont Alto,		900			900						
Lincoln, Miss C.,	Clearfield,	4,000				3,000						
Reagan, C. R.,	Mont Alto,	7,000				3,000						
Rutherford, B. J.,	Clearfield,		1,200			600						
Starook, Clyde,	Asaph,		300									
Showalter, C. M.,	Mont Alto,		3,400			1,600						
Walker, J. H.,	Greenwood,			500								
Williams, S. H.,	Mont Alto,		1,000			1,000						
Warren:												
Falconer, Arch.,	Asaph,		1,000									
Hunter, L. L. Est.,	Clearfield,	10,000										
Wilson, Hugh,	Asaph,	500										
Wayne:												
Gouldsboro Ice Co.,	Asaph,		3,000									
Stirling, A. B.,	Asaph,		500									
Westmoreland:												
Apollo Water Co.,	Clearfield,											
Apollo Water Co.,	Mont Alto,	18,700				2,000			2,000			
Baker, Frank,	Clearfield,	500										
Hobaugh, J. H.,	Clearfield,	500										
York:												
City of York,	Mont Alto,		2,000									
Johnson, Mrs. J. A.,	Clearfield,	200				600						
Penna. Water & Power Co.,	Greenwood,		4,000								3,000	
Penna. Water & Power Co.,	Mont Alto,					5,000						
Snavely, D. L.,	Mont Alto,		2,000									
York Water Co.,	Mont Alto,		5,000									
Total number shipped,		478,975	484,100	11,800	9,350	344,800	12,900	100	84,400	6,100	101,500	9,700
Net number planted,		473,975	483,100	11,300	9,350	343,300	12,900	100	83,400	6,100	100,500	9,700
Total cost of number planted,		$710 96	$966 20	$39 55	$28 18	$514 95	$25 80	$0 40	$125 10	$9 15	$201 00	$27 50

TABLE 29.—Continued.

County and Name.	Nursery.	European Larch.		Japanese Larch.	Douglas Fir.	Sugar Maple.	White Ash.	Honey Locust.	Totals.
		2.	2-2.	2.	3-2.	1-1.	1-1.	1.	
Adams:									
Hoffman, E. N.,	Mont Alto,								1,000
Smith, G. F.,	Mont Alto,								1,000
Williams, J. L.,	Mont Alto,								10,500
Allegheny:									
Bartberger, C. M.,	Mont Alto,								500
Brown, Mrs. J. D.,	Mont Alto,			100					1,000
Ferla, Henry,	Mont Alto,								1,000
Grall, Mrs. M.,	Clearfield,								2,000*
Haysville Water Co.,	Clearfield,	300							1,100*
Haysville Water Co.,	Mont Alto,			300					9,300*
Lockard, C. R.,	Asaph,								500
Lockhart, J. H.,	Mont Alto,								2,000*
McAleer, B.,	Clearfield,								500
Mason, Mrs. M. F.,	Mont Alto,								2,000*
Mathews, F. V.,	Mont Alto,								1,000*
Thorn Hill School,	Clearfield,								2,000
Walker, Wm.,	Clearfield,	1,000							1,000
Walker, Wm.,	Mont Alto,								3,000
Western Penitentiary,	Clearfield,	2,000							2,000†
Western Penitentiary,	Greenwood,						200		200†
Western Penitentiary,	Mont Alto,			2,000					14,000†
Beaver:									
Mackall, R. C.,	Greenwood,								5,000*
Wagner, Mrs. B.,	Asaph,								5,500
Berks:									
Althouse, C. S.,	Greenwood,					100	100		500
Bethany Orphans Home,	Mont Alto,								1,200
Borough of Fleetwood,	Clearfield,	5,000							35,000*
Bright, G. H.,	Asaph,			200					2,100
Bright, G. H.,	Greenwood,				150	300			450
City of Reading,	Asaph,	2,500		2,500					5,000
Faust, F. S.,	Mont Alto,								3,000
Fritz, S. H.,	Mont Alto,								5,000
Galen Mountain Co.,	Clearfield,	500							5,000*
Mendel, Jos.,	Mont Alto,								1,200
Nolde, Jacob, Est.,	Clearfield,	800							800*
Nolde, Jacob, Est.,	Greenwood,								4,000*
Nolde, Jacob, Est.,	Mont Alto,								15,000*
Rick, J. G.,	Clearfield,	2,000							3,000
Rick, J. G.,	Mont Alto,								7,000
Rutter, W. M., Est.,	Mont Alto,								1,800
Snyder, E. G.,	Clearfield,	500							3,500
State Asylum,	Clearfield,	500							2,900
State Asylum,	Mont Alto,			500					5,900
Windsor Water Co.,	Clearfield,								13,600
Blair:									
Allegheny Water Co.,	Clearfield,	500							500*
Allegheny Water Co.,	Greenwood,					500			1,000
Bald Eagle Water Co.,	Clearfield,	5,000							5,000
Bald Eagle Water Co.,	Mont Alto,								23,000
Blair Co. G. F. & For. Assoc.,	Mont Alto,								20,000†
Davis, T. S.,	Mont Alto,								2,700
Dively, Mrs. M.,	Mont Alto,			200					1,000
Hicks, Mrs. J. F.,	Clearfield,	1,200							4,200
Bradford:									
McDonald, D.,	Asaph,								1,500
Lee, C. C.,	Mont Alto,								500
Lowry, W. N.,	Asaph,	300		200		300		150	2,450¶
Shadduck, J. B.,	Clearfield,	11,800							35,400
Bucks:									
Claxton, T. B.,	Mont Alto,								500
Durns, S. H.,	Mont Alto,								500
Harkins, G. W., Jr.,	Mont Alto,								1,400*
Hendricks, J. F.,	Mont Alto,	7,230							7,230¶
Kindred, C. F.,	Clearfield,	2,000							2,000
Kindred, C. F.,	Greenwood,								600
Kindred, C. F.,	Mont Alto,								12,000
Stuckert, W. R.,	Greenwood,					600			600
Stuckert, W. R.,	Mont Alto,			200					1,000
Cambria:									
Cambria Min. & Mfg. Co.,	Clearfield,	5,000							60,000*
Cambria Min. & Mfg. Co.,	Greenwood,						5,000		5,000
Cambria Iron Co.,	Asaph,								200‡
Ebensburg Coal Co.,	Clearfield,	5,000							15,000
Hahn, J. L.,	Clearfield,								2,000*
Johnstown Water Co.,	Asaph,								30,000
Portage Water Co.,	Clearfield,	2,000							16,600
South Fork Water Co.,	Mont Alto,								5,000
State Dept. of Health,	Clearfield,	2,000							2,000
State Dept. of Health,	Mont Alto,								8,000
Thomas, J. O.,	Greenwood,					100	100		3,200
Weston, W. H.,	Clearfield,	500							1,000

*Some planted in temporary nursery.
†No report received.
¶Distributed in small lots.
‡Used for Arbor Day planting.

TABLE 29.—Continued.

County and Name.	Nursery.	European Larch.		Japanese Larch.	Douglas Fir.	Sugar Maple.	White Ash.	Honey Locust.	Totals.
		2.	2-2	2.	3-2.	1-1.	1-1.	1.	
Carbon:									
Honey Brook Water Co.,	Clearfield,	4,000							17,000
Honey Brook Water Co.,	Mont Alto,								8,000
Muller, Adolph,	Clearfield,	2,000							21,000
Panther Valley Water Co.,	Mont Alto,								30,000*
Centre:									
Durst, Samuel,	Asaph,							400	1,900
Grove, F. C.,	Clearfield,	1,000							7,500
Hoy, H. N.,	Mont Alto,								500
Lehigh Valley Coal Co.,	Mont Alto,								60,000
Luse, C. W.,	Mont Alto,								2,000
Musser, Dr. C. S.,	Greenwood,								500
Musser, E. N.,	Mont Alto,								1,500
Orndorf, I. M.,	Clearfield,								15,500
Ramey Water Co.,	Clearfield,								16,000
Weaver, L. L.,	Mont Alto,								13,000
Chester:									
Baugh, Miss M.,	Greenwood,			500		500			1,000
Baugh, Miss M.,	Mont Alto,								3,500
Crossan, W. H., & Son,	Clearfield,	200							500
Davis, Miss A. J.,	Asaph,								500
Esherick, W. H.,	Mont Alto,	200							600*
Great Bear Tract,	Asaph,	2,000				1,000			3,000*
Great Bear Tract,	Greenwood,						1,000		1,000*
Great Bear Tract,	Mont Alto,								6,000*
Gruber, I. W.,	Mont Alto,								8,500
Hayman, E. B.,	Greenwood,					200			1,700
Jaquette, I. G.,	Mont Alto,								1,500
Ketler, W. H.,	Mont Alto,								3,500†
Lewis, Mrs. M. P.,	Greenwood,						500		1,000*
Morse, N. K.,	Clearfield,	300							2,800*
Morse, N. K.,	Greenwood,			200			300		500*
Sharples, P. M.,	Clearfield,								21,000
Sharples, P. M.,	Greenwood,			2,000					3,000
Taylor, R. S.,	Mont Alto,								2,000
Westtown School,	Clearfield,	1,000							16,000*
Clarion:									
Collner, H. C.,	Greenwood,			500		500			1,000
Collner, H. C.,	Mont Alto,								1,000
Fox Estate,	Clearfield,	1,000							11,000
Fox Estate,	Mont Alto,								12,500
Harvey Brothers,	Clearfield,	2,000							7,000
Harvey Brothers,	Mont Alto,								7,500
Porterfield, Mrs. H. H.,	Clearfield,	1,000							16,000
Clearfield:									
Arnold, W. D.,	Clearfield,				100				500
City of DuBois,	Greenwood,		225	4,300	1,100	4,800	1,000		21,875
Crystal Spring Club,	Clearfield,	500							1,000
DuBois Hospital,	Greenwood,								1,000
General Refractories Co.,	Greenwood,								500
McCreight, M. I.,	Clearfield,								500
Palmgren, E. J.,	Asaph,							500	500
Straw, Harrison,	Clearfield,	200							500
Swope, Mrs. E. V.,	Clearfield,								1,000
Woodside, H. L.,	Clearfield,	300							1,000
Clinton:									
Bowden, John,	Clearfield,								10,000
Calhoun, A. G.,	Mont Alto,								15,000
Steele, Chas.,	Clearfield,								14,000
Steele, Chas.,	Greenwood,								3,000
Columbia:									
Hess, J. B.,	Mont Alto,								3,000
Petro, John,	Mont Alto,								5,500
Robbins, C. Z.,	Asaph,	5,000							5,000
Wagner, Mrs. D. E.,	Mont Alto,								1,000*
Welliver, Dr. G. H.,	Asaph,	1,000				300			3,000
Crawford:									
Campbell, J. T.,	Mont Alto,								1,500
Mumford, J. L.,	Mont Alto,								600
Stelle, C. A.,	Asaph,					200			500
Cumberland:									
Addams, C. P.,	Asaph,								25
Beetem, C. G.,	Asaph,	500		400		100			1,000*
Beetem, C. G.,	Mont Alto,								3,300*
Bliss, R. P.,	Mont Alto,								3,000
Dauphin:									
Bogner, I. F.,	Mont Alto,								6,000*
Dept. of Forestry,	Asaph,								200¶
Dept. of Forestry,	Greenwood,		100	100	100				900¶
Dept. of Forestry,	Pocono,								200¶
Dept. of Forestry,	Penn,				13				13¶
Knapp, W. E.,	Mont Alto,								1,000
Shenk, A. B.,	Greenwood,			500		200			2,200
Wiest, W. W.,	Mont Alto,			100					800

*Some planted in temporary nursery. †No report received. ¶Distributed in small lots.

TABLE 29—Continued.

County and Name.	Nursery.	European Larch.		Japanese Larch.	Douglas Fir.	Sugar Maple.	White Ash.	Honey Locust.	Totals.
		2.	2-2.	2.	3-2.	1-1.	1-1.	1.	
Delaware:									
Crowell, S. B.,	Greenwood,					200	300		700
Crowell, S. B.,	Mont Alto,								1,300
Gray, W. S.,	Clearfield,	500							2,000
Riddle, S. D.,	Clearfield,								8,000
Ross, Rev. M. L.,	Mont Alto,								1,500
Wood, L. H.,	Mont Alto,								500*
Elk:									
Brockway Crystal Ice Co.,	Greenwood,								1,000
Charleroi Mountain Club,	Asaph,					500			500
Charleroi Mountain Club,	Mont Alto,								20,000
Elk Fire Brick Co.,	Clearfield,								10,000
Lipsey, Thomas,	Mont Alto,								600
St. Marys Water Co.,	Clearfield,								50,000
Erie:									
Brown, W. S.,	Greenwood,						500		1,000
Mayer, Henry Est.,	Clearfield,								1,500
St. Marys College,	Asaph,	2,000		1,000					15,000
St. Marys College,	Greenwood,					500	500		1,000
Fayette:									
American Man. & Mfg. Co.,	Clearfield,	2,000							8,000
American Man. & Mfg. Co.,	Greenwood,			2,000					2,000
Whipkey, W. L.,	Mont Alto,								500
Forest:									
Anderson, J. P.,	Mont Alto,								500
Franklin:									
Benchoff, L. F.,	Mont Alto,								2,000
Lyons, Jos.,	Greenwood,					500			1,000
Miller, C. C.,	Clearfield,	1,000							1,000
Miller, C. C.,	Mont Alto,								6,000
Myers, S. J.,	Mont Alto,								1,200
Myers, B. C.,	Mont Alto,								5,000‡
Oellig, J. B.,	Mont Alto,								4,000
Greene:									
Scott, Bert,	Mont Alto,								800*
Huntingdon:									
Indiana Bear Club,	Greenwood,								5,000
Indiana:									
Cunkelman, Mrs. Geo.,	Mont Alto,								3,000
Harris, Thos.,	Mont Alto,								500
Marshall, T. D.,	Asaph,								1,000*
Munshower, Mrs. S. S.,	Greenwood,								500
Thomas, J. A.,	Clearfield,	500							2,800
Wagner, Clyde,	Clearfield,								3,000
Jefferson:									
Elliott, Hon. S. B.,	Clearfield,	100							350†
Jordan, C. B.,	Mont Alto,								1,000
McCreight, J. M.,	Greenwood,			3,000					3,000
Juniata:									
Burns, S. H.,	Mont Alto,								2,500§
Zimmerman, D. A.,	Mont Alto,								1,000
Lackawanna:									
Benjamin, A. P.,	Clearfield,	1,000							11,000
Crossman, A. W.,	Greenwood,					500			5,500*
Whitmore, A. L.,	Asaph,								2,000
Whitmore, D. C.,	Asaph,								2,800
Lancaster:									
Detweiler, Dr. T. C.,	Mont Alto,			500					4,000*
Lancaster E. L. H. & P. Co.,	Mont Alto,			300					1,500*
Masonic Home,	Asaph,			200					700*
Oldweiler, Horace,	Mont Alto,								300†
Penna. Water & Power Co.,	Asaph,								8,000
Shirk, E. M.,	Clearfield,	200							500
Slaymaker, S. R.,	Clearfield,	3,000							3,000
Slaymaker, S. R.,	Greenwood,								7,000
Lebanon:									
Penna. Chautauqua,	Clearfield,	500							1,000*
Lehigh:									
Adams, J. G.,	Mont Alto,								500
Luzerne:									
Black Diamond Powder Co.,	Mont Alto,								1,500
Dallas Water Co.,	Clearfield,								3,000
Hess, L. E.,	Mont Alto,								6,000
Hummel, A. J.,	Clearfield,	4,000							9,000
Hummel, A. J.,	Greenwood,			500			500		6,000
Luzerne Co. Indust. School,	Clearfield,	1,000							7,000
Luzerne Co. Indust. School,	Mont Alto,								10,400
Wyoming Valley Water Supply Co.,	Mont Alto,								30,000
Lycoming:									
Duffy, S. T.,	Clearfield,								1,000
Dunwoody, F. & G. Club,	Asaph,								2,000
Graham, H. T.,	Clearfield,								2,000
Hardt, Dr. A. F.,	Mont Alto,								1,000*

*Some planted in temporary nursery. §Lost in transit. ¶Distributed in small lots.
†No report received. ‡Lifted and packed, but never called for.

TABLE 29.—Continued.

County and Name.	Nursery.	European Larch.		Japanese Larch.	Douglas Fir.	Sugar Maple.	White Ash.	Honey Locust.	Totals.
		2.	2-2.	2.	3-2.	1-1.	1-1.	1.	
Highland Orchard Co.,	Mont Alto,								9,000
Kurtz, J. C.,	Asaph,							100	600
Lamade, A. C.,	Mont Alto,								1,000
Scarborough, Mrs. L. J.,	Clearfield,								2,000
Ulmer, L. J.,	Asaph,	100							500*
Williamsport Water Co.,	Mont Alto,								27,300
McKean:									
Hogarth, Ostrander & Co.,	Asaph,	5,000							15,000
Mt. Jewett Water Co.,	Mont Alto,								500
Smith, S. W.,	Asaph,								27,000
Ventres, W. R.,	Greenwood,			200					2,200
Mercer:									
Ball, A. E.,	Asaph,								1,000
Miller, S. C.,	Clearfield,	200							900
Steiner & Oswald,	Asaph,	1,500							**3,000**
Monroe:									
Barry, Oran,	Clearfield,								1,000
Biggs, G. N.,	Greenwood,						500		1,000
Brewer, W. H.,	Mont Alto,								1,000
Buck, Casper,	Mont Alto,								500
Everitt, E. H.,	Asaph,								500
Fisher, W. R.,	Pocono,								500
Heller, H. E.,	Pocono,								2,000‖
Hoffman, L. S.,	Asaph,								3,000
Karch, J. W.,	Clearfield,	200							700
Lamb, W. D. Est.,	Mont Alto,								500
Lester, G. R.,	Pocono,								500‖
Lynch, T. M.,	Greenwood,			100		200		200	500†
Lynch, T. M.,	Mont Alto,								1,300†
P. O. S. of A., Mt. Home,	Greenwood,		500		500				4,500‡
Rhoads, A. L.,	Clearfield,								1,500
Starner, G. F.,	Mont Alto,								1,200
Tobyhanna Creek Ice Co.,	Clearfield,	3,000							19,000
Van Allen, C. E.,	Asaph,								1,000
Wagner, G. E.,	Greenwood,						500		1,500
Wilson, Edgar,	Mont Alto,								2,000§
Wirt, C. H.,	Greenwood,						1,000		1,000
Montgomery:									
Borough of Norristown,	Clearfield,	200							700*
Cooke, G. J.,	Mont Alto,			100					2,100
Ehrgood, E. E.,	Greenwood,						500		1,500
Fisher, C. W.,	Mont Alto,			200					1,200*
Johnson, J. A.,	Mont Alto,								500¶
Keffer Karl,	Clearfield,	200							500
Moyer, A. M.,	Clearfield,	100							1,100
Northampton:									
Bangor Water Co.,	Clearfield,	2,000							2,000
Bangor Water Co.,	Greenwood,					1,000			1,000
Bangor Water Co.,	Mont Alto,								19,000
Blue Ridge Water Supply Co.,	Clearfield,	2,000							4,000
Blue Ridge Water Supply Co.,	Mont Alto,								12,000
City of Easton,	Clearfield,	4,000							20,000*
Lehigh University,	Clearfield,	1,000							11,000
Lehigh University,	Greenwood,					1,000			4,000
Moorestown Salem Union Ch.,	Asaph,	1,000							1,400*
Northumberland:									
Bowden, John,	Clearfield,								2,000
Fairchilds, A. A.,	Mont Alto,								1,500
Kieffer, G. P.,	Clearfield,	300							1,400
Kline, J. S.,	Asaph,	500							2,000
Mt. Carmel Water Co.,	Asaph,								1,000
Mt. Carmel Water Co.,	Mont Alto,								1,000
White Deer Water Co.,	Clearfield,	3,000							5,000
White Deer Water Co.,	Mont Alto,								10,000
Perry:									
Bair, G. B. M.,	Mont Alto,								500
Hardt, C. W.,	Mont Alto,								500
Wittenmyer, S.,	Mont Alto,	1,000							15,000
Pike:									
Knupp, Jac.,	Clearfield,	500							10,500
Shepherd, Thos.,	Clearfield,	100							1,000
Potter:									
A. A. S. R. Bodies,	Asaph,	300							700
Austin, A. F.,	Mont Alto,								2,000
Austin, R. S.,	Mont Alto,								1,400
Borough of Austin,	Mont Alto,								1,500
Bundy, J. B.,	Mont Alto,								500
Earle, E. A.,	Mont Alto,								2,800
Galeton Industrial Union,	Asaph,	2,500							10,000
Grabe, T. A.,	Asaph,								500
Glassmire, D. F.,	Asaph,	300							1,000
Guenter, J., Jr.,	Asaph,	500							500
Hall, Clyde,	Clearfield,	500							2,000†
Hollenbeck, O. B.,	Mont Alto,								2,000

†No report received. ¶Distributed in small lots.
*Some planted in temporary nursery. ‖Planted fall of 1916.
†Used for Arbor Day planting. §Lost in transit.

TABLE 29.—Continued.

County and Name.	Nursery.	European Larch.		Japanese Larch.	Douglas Fir.	Sugar Maple.	White Ash.	Honey Locust.	Totals.
		2.	2-2.	2.	3-2.	1-1.	1-1.	1.	
Jones, A. F.,	Greenwood,		400	600	500				4,000
Consolidated Water Co.,	Clearfield,	2,000							2,000
Consolidated Water Co.,	Mont Alto,								18,000
Lewis, R. R.,	Asaph,	1,000						164	4,194
Lewis, R. R.,	Greenwood,			300	500				2,000
Lockwood, J. A.,	Clearfield,	500							3,500
Mette, Sophia,	Mont Alto,								13,000
Nuschke, Louis,	Mont Alto,								4,000
Quinby, Alvin,	Greenwood,								2,000
Rees, O. A.,	Clearfield,								1,000
Shadenberger, F. A.,	Clearfield,	2,000							2,000
Snyder, J. M.,	Greenwood,								4,000
Stuckey, Isaac,	Asaph,			500					500
Tyler, C. E.,	Clearfield,								10,000
Schuylkill:									
Citizens Water Co.,	Mont Alto,								6,000
Daddow, T. R.,	Clearfield,	1,000							**1,000**
Daddow, T. R.,	Greenwood,					500	500		1,000
Daddow, T. R.,	Mont Alto,	500							16,000
Girard Water Co.,	Mont Alto,								40,000
Glick, Mrs. A. H.,	Clearfield,	1,300							1,300‡
Heim, G. F.,	Mont Alto,								500
Kaufman, C. M.,	Mont Alto,								1,200
Phila. & Reading Coal & Iron Co.,	Asaph,	600				100		400	4,500
Phila. & Reading Coal & Iron Co.,	Greenwood,						500		1,000
Snyder:									
Boyer, J. C.,	Clearfield,	1,000							1,000
Boyer, J. C.,	Mont Alto,								4,000
Hetrick, J. H.,	Clearfield,	600							8,100
Kline, W. H.,	Greenwood,								500
Rigel, J. W.,	Greenwood,								3,000
Somerset:									
Brant, F. J.,	Mont Alto,								1,000
Miltenberger, W. G.,	Mont Alto,								500
Windber Water & Power Co.,	Mont Alto,								2,000
Susquehanna:									
Vail, C. S.,	Asaph,	1,000							3,000
Wyalusing Dist. Camp Ground,	Asaph,	500					500		1,000
Tioga:									
Austin, S. C.,	Asaph,								500
Blackwell, S. X.,	Asaph,								3,000
Campbell, J. D.,	Mont Alto,								5,000
Fick, H. J.,	Asaph,								1,000
Gross, H. A.,	Asaph,								2,000
Vermilyea, C. E.,	Asaph,			200					1,000
Wood, C. M.,	Asaph,			200					500
Union:									
Dauberman, F. P.,	Mont Alto,								500
Libby, W. H.,	Mont Alto,			300					2,100
Lincoln, Miss C.,	Clearfield,	1,000							8,000
Reagan, C. R.,	Mont Alto,								10,000
Rutherford, B. J.,	Clearfield,								1,800
Starook, Clyde,	Asaph,					400			1,000
Showalter, C. M.,	Mont Alto,								5,000
Walker, J. H.,	Greenwood,								500§
Williams, S. H.,	Mont Alto,								2,000
Warren:									
Falconer, Arch.,	Asaph,								1,000
Hunter, L. L. Est.,	Clearfield,								10,000
Wilson, Hugh,	Asaph,								500
Wayne:									
Gouldsboro Ice Co.,	Asaph,	1,000							4,000
Stirling, A. B.,	Asaph,	200							700*
Westmoreland:									
Apollo Water Co.,	Clearfield,	1,200							1,200
Apollo Water Co.,	Mont Alto,								22,700
Baker, Frank,	Clearfield,								500
Hobaugh, J. H.,	Clearfield,	500							1,000*
York:									
City of York,	Mont Alto,								2,000
Johnson, Mrs. J. A.,	Clearfield,	200							1,000
Penna. Water & Power Co.,	Greenwood,								7,000
Penna. Water & Power Co.,	Mont Alto,								5,000
Snavely, D. L.,	Mont Alto,								2,000
York Water Co.,	Mont Alto,								5,000
Total number shipped,		144,830	1,225	25,700	2,963	15,100	14,200	1,654	1,749,397
Net number planted,		144,830	1,225	25,700	2,963	15,100	14,200	1,654	1,739,397
Total cost of number planted,		$217 25	$3 68	$38 55	$13 34	$45 30	$42 60	$2 56	$3,012 06

*Some planted in temporary nursery.
‡Used for Arbor Day planting. §Lost in transit.

TABLE 30.—SEEDLING SHIPMENTS TO STATE FORESTS, 1917.

Forest.	Nursery.	White Pine.			Scotch Pine.		Pitch Pine.	
		2.	3	Transplants.	2.	3 & 5.	2 & 3.	Transplants.
Austin,	Asaph,	50,000	25,000					
Austin,	Austin,			16,700				13,400
Austin,	Mont Alto,		25,000					
Austin,	Total,	50,000	50,000	16,700				13,400
Barree,	Greenwood,				3,000			
Bear Meadows,	Greenwood,				17,000	3,000		
Bedford,	Clearfield,		1,000		1,000		1,000	
Black Forest,	Black Forest,	75,000			10,000		29,000	
Black Forest,	Clearfield,							
Black Forest,	Greenwood,							
Black Forest,	Mont Alto,							
Black Forest,	Total,	75,000			10,000		29,000	
Blackwells,	Asaph,		50,000					
Blackwells,	Black Forest,							
Blackwells,	Greenwood,		40,000		20,000			
Blackwells,	Mont Alto,				35,000			
Blackwells,	Total,		90,000		55,000			
Brumbaugh,	Greenwood,		15,000		15,000			
Brumbaugh,	Mont Alto,		20,000		20,000			
Brumbaugh,	Total,		35,000		35,000			
Buffalo,	Asaph,			27,000				
Buffalo,	Clearfield,				50,000			
Buffalo,	Greenwood,		†87,100					
Buffalo,	Mont Alto,	50,000	20,000		65,000			
Buffalo,	Total,	50,000	107,100	27,000	115,000			
Caledonia,	Caledonia,				5,500			
Caledonia,	Clearfield,	25,000						
Caledonia,	Mont Alto,	25,000					10,000	
Caledonia,	Pocono,			1,750				
Caledonia,	Total,	50,000		1,750	5,500		10,000	
Greenwood,	Greenwood,				23,000	5,200		3,800
Hull,	Hull,		16,200		71,800	11,000		19,000
Karthaus,	Black Forest,							
Karthaus,	Clearfield,				25,000			
Karthaus,	Greenwood,		39,000		6,000			
Karthaus,	Total,		39,000		31,000			
Kettle Creek,	Asaph,		25,000		5,000			
Kettle Creek,	Greenwood,							
Kettle Creek,	Kettle Creek,	250	10,000				3,000	1,500
Kettle Creek,	Total,	250	35,000		5,000		3,000	1,500
Loyalsock,	Greenwood,		5,000					
Loyalsock,	Mont Alto,				5,000			
Loyalsock,	Total,		5,000		5,000			
Lushbaugh,	Greenwood,		‡24,000					
Lushbaugh,	Lushbaugh,						22,400	1,800
Lushbaugh,	Mont Alto,		40,000					
Lushbaugh,	Total,		64,000				22,400	1,800
McClure,	Clearfield,	23,000						
McElhattan,	Asaph,							
McElhattan,	Clearfield,				60,000		50,000	
McElhattan,	Greenwood,				40,000			
McElhattan,	Mont Alto,	30,000						
McElhattan,	Total,	30,000			100,000		50,000	
Medix,	Clearfield,	13,000			37,000			
Medix,	Medix,	200			4,000		24,800	
Medix,	Total,	13,200			41,000		24,800	
Minisink,	Clearfield,	15,000			5,000			

†Order called for 87,600 W. P. (3); Silvius gave 500 to Dr. C. S. Musser.
‡Order called for 33,000 W. P. (3); 11,000 lost in transit.

TABLE 30.—Continued.

Forest.	Nursery.	White Pine.			Scotch Pine.		Pitch Pine.	
		2.	3.	Trans-plants.	2.	3 & 5.	2 & 3.	Trans-plants.
Mont Alto,	Mont Alto,				43,000		43,000	
Nittany,	Mont Alto,		35,000		22,000			
Nittany,	Nittany,		3,900				3,200	
Nittany,	Total,		38,900		22,000		3,200	
Ole Bull,	Asaph,			25,000				
Ole Bull,	Clearfield,	75,000						
Ole Bull,	Mont Alto,		25,000					
Ole Bull,	Ole Bull,	3,000			42,200	11,400	5,600	
Ole Bull,	Total,	78,000	25,000	25,000	42,200	11,400	5,600	
Penfield,	Penfield,		41,700					
Penn,	Clearfield,	200,000					100,000	
Penn,	Mont Alto,						100,000	
Penn,	Penn,							
Penn,	Total,	200,000					200,000	
Pine Grove,	Clearfield,	18,000						
Pine Grove,	Pine Grove,	6,400						
Pine Grove,	Total,	24,400						
Pocono,	Clearfield,	1,000			500		13,000	
Pocono,	Mont Alto,		20,000			500		
Pocono,	Pocono,							
Pocono,	Total,	1,000	20,000		500	500	13,000	
Promised Land,	Mont Alto,	30,000	20,000					
Rothrock,	Greenwood,				20,000			
Seven Mountains,	Clearfield,	20,000						
Seven Mountains,	Greenwood,		20,000					240
Seven Mountains,	Seven Mountains,			160				
Seven Mountains,	Total,	20,000	20,000	160	20,000			240
Sinnemahoning,	Asaph,				7,800	17,200		
Sinnemahoning,	Mont Alto,		20,000					
Sinnemahoning,	Total,		20,000		7,800	17,200		
Sizerville,	Clearfield,	65,000			35,000			
Snow Shoe,	Clearfield,	15,000			15,000			
Snow Shoe,	Penfield,							
Snow Shoe,	Snow Shoe,			450				
Snow Shoe,	Total,	15,000		450	15,000			
Stone,	Asaph,			14,600	16,500		14,100	
Stuart,	Clearfield,	120,000			50,000		10,000	
Tea Spring,	Clearfield,	4,000						
Whetham,	Whetham,	4,350	8,000				4,800	
White Deer,	Mont Alto,		10,000		5,000			
White Deer,	White Deer,							
	Total,							
White Deer,	Penfield,		10,000		5,000			
Net number planted,		868,200	645,900	85,630	785,300	14,100	435,400	38,240
Total costs,		$1,302 30	$1,291 80	$216 70	$1,177 95	$94 75	$681 45	$95 60

TABLE 30.—Continued.

Forest.	Nursery.	Norway Spruce. 2.	Norway Spruce. 3.	Norway Spruce. Transplants.	European Larch. 2 & 3.	Japanese Larch. 2.	Douglas Fir. 3-2.	White Ash. 1-1.	Totals to Forests from each Nursery.	Totals to Forests from all Nurseries.
Austin,	Asaph,		36,000						105,000	
Austin,	Austin,								30,100	
Austin,	Mont Alto,		20,000						45,000	
Austin,	Total,		50,000							180,100
Barree,	Greenwood,				5,500				13,500	13,500
Bear Meadows,	Greenwood,								20,000	20,000
Bedford,	Clearfield,								3,000	3,000
Black Forest,	Black Forest,				15,000				15,000	
Black Forest,	Clearfield,		40,000						154,000	
Black Forest,	Greenwood,							1,000	1,000	
Black Forest,	Mont Alto,					15,000			15,000	
Black Forest,	Total,		40,000		15,000	15,000		1,000		185,000
Blackwells,	Asaph,								50,000	
Blackwells,	Black Forest,		35,000						35,000	
Blackwells,	Greenwood,								60,000	
Blackwells,	Mont Alto,								35,000	
Blackwells,	Total,		35,000							180,000
Brumbaugh,	Greenwood,								30,000	
Brumbaugh,	Mont Alto,								40,000	
Brumbaugh,	Total,									70,000
Buffalo,	Asaph,								27,000	
Buffalo,	Clearfield,								50,000	
Buffalo,	Greenwood,		52,900						140,000	
Buffalo,	Mont Alto,								135,000	
Buffalo,	Total,		52,900							352,000
Caledonia,	Caledonia,								5,500	
Caledonia,	Clearfield,				*26,800				51,800	
Caledonia,	Mont Alto,		25,000						60,000	
Caledonia,	Pocono,								1,750	
Caledonia,	Total,		25,000		26,800					119,050
Greenwood,	Greenwood,								32,000	32,000
Hull,	Hull,							25	118,025	118,025
Karthaus,	Black Forest,		15,000						15,000	
Karthaus,	Clearfield,								25,000	
Karthaus,	Greenwood,		15,000						60,000	
Karthaus,	Total,		30,000							100,000
Kettle Creek,	Asaph,				10,000				40,000	
Kettle Creek,	Greenwood,		15,000					5,000	20,000	
Kettle Creek,	Kettle Creek,		7,000	50	2,150				23,950	
Kettle Creek,	Total,		22,000	50	12,150			5,000		83,950
Loyalsock,	Greenwood,		5,000						10,000	
Loyalsock,	Mont Alto,								5,000	
Loyalsock,	Total,		5,000							15,000
Lushbaugh,	Greenwood,								24,000	
Lushbaugh,	Lushbaugh,								24,200	
Lushbaugh,	Mont Alto,								40,000	
Lushbaugh,	Total,									88,200
McClure,	Clearfield,	5,000			15,000				43,000	43,000
McElhattan,	Asaph,		40,000						40,000	
McElhattan,	Clearfield,								110,000	
McElhattan,	Greenwood,								40,000	
McElhattan,	Mont Alto,		10,000						40,000	
McElhattan,	Total,		50,000							230,000
Medix,	Clearfield,								50,000	
Medix,	Medix,								29,000	
Medix,	Total,									79,000
Minisink,	Clearfield,								20,000	20,000
Mont Alto,	Mont Alto,								86,000	86,000
Nittany,	Mont Alto,								57,000	

*Order called for only 25,000 E. L. (3).

TABLE 30.—Continued.

Forest.	Nursery.	Norway Spruce. 2.	Norway Spruce. 3.	Norway Spruce. Transplants.	European Larch. 2 & 3.	Japanese Larch. 2	Douglas Fir. 3-2.	White Ash. 1-1.	Totals to Forests from each Nursery.	Totals to Forests from all Nurseries.
Nittany,	Nittany,								7,100	
Nittany,	Total,									64,100
Ole Bull,	Asaph,		25,000						50,000	
Ole Bull,	Clearfield,				25,000				100,000	
Ole Bull,	Mont Alto,		35,000						60,000	
Ole Bull,	Ole Bull,	10,800						22,200	95,200	
Ole Bull,	Total,	10,800	60,000		25,000			22,200		305,200
Penfield,	Penfield,								41,700	41,700
Penn,	Clearfield,								300,000	
Penn,	Mont Alto,								100,000	
Penn,	Penn,			23			377		400	
Penn,	Total,			23			377			400,400
Pine Grove,	Clearfield,								18,000	
Pine Grove,	Pine Grove,	33,000							39,400	
Pine Grove,	Total,	33,000								57,400
Pocono,	Clearfield,	500							15,000	
Pocono,	Mont Alto,		10,000						30,000	
Pocono,	Pocono,								500	
Pocono,	Total,	500	10,000							45,500
Promised Land,	Mont Alto,		25,000						75,000	75,000
Rothrock,	Greenwood,			2,500		2,000	1,000		5,500	5,500
Seven Mountains,	Clearfield,								40,000	
Seven Mountains,	Greenwood,								20,000	
Seven Mountains,	Seven Mountains,			60	25		10		495	
Seven Mountains,	Total,			60	25		10			60,495
Sinnemahoning,	Asaph,				5,000				30,000	
Sinnemahoning,	Mont Alto,								20,000	
Sinnemahoning,	Total,				5,000					50,000
Sizerville,	Clearfield,								100,000	100,000
Snow Shoe,	Clearfield,								30,000	
Snow Shoe,	Penfield,			400					400	
Snow Shoe,	Snow Shoe,		18,350		6,000				24,800	
Snow Shoe,	Total,		18,350	400	6,000					55,200
Stone,	Asaph,		15,000		12,000				72,200	72,200
Stuart,	Clearfield,	20,000							200,000	200,000
Tea Spring,	Clearfield,								4,000	4,000
Whetham,	Whetham,		3,250		3,100				23,500	23,500
White Deer,	Mont Alto,								15,000	
White Deer,	White Deer,			2,100				600	2,700	
White Deer,	Total,			2,100				600		17,700
Net number planted,		69,300	441,500	5,133	220,075	22,500	1,387	28,825	3,595,720	3,595,720
Total costs,		$103 95	$883 00	$15 21	$183 30	$33 75	$6 24	$52 58		$6,138 58

TABLE 31.—WILLOW CUTTINGS IN HOLTS. SHIPMENTS FROM ALL SOURCES TO STATE FORESTS AND TO INDIVIDUALS, 1917.

Forest or Name.	Source.	Lemley.	Purple.	American green.	Silver skin.	Casplan.	Totals.	Area (acres).	Cost of cuttings.	Cost of planting.	Total cost.
State Forests.											
Black Forest,	Grays Run,	17,000					17,000	0.19	$12 75	$22.20	$34.95
Buffalo,	Mont Alto,			15,000	5,000		20,000	0.48	15 00	51 08	66 08
Greenwood,	Blackwells,	18,700					18,700	0.36	14 02	54 02	68 04
Kishacoquillas,*	Kishacoquillas,		14,000			111,000	125,000	3.35	111 75	123 96	235 71
Kishacoquillas,*	Mont Alto,		24,000				24,000				
Nittany,	Mont Alto,			63,000			63,000	2.70	47 25	182 43	229 68
Penfield,†	Penfield,		150	150			300	0.40*	23	4 00	4 23
Promised Land,*	Blackwells,		10,850				10,850	2.00	83 14	292 87	376 01
Promised Land,*	Grays Run,	50,000	50,000				100,000				
Stuart,	Blackwells,		4,000				4,000	0.14	3 00	12 10	15 10
Totals,		85,700	103,000	78,150	5,000	111,000	382,850	9.62	$287 14	$742 66	$1,029 80
Total costs,		$64.28	$77.25	$58.61	$3.75	$83.25	$287.14				
Individuals.‡											
Fleming, Dr. J. S.,	Grays Run,	11,600					11,600				
Huber, Mrs. M.,	Pine Grove,				100		100				
Nolde, Jac., Est.,	Grays Run,	23,000					23,000				
Wernersville Asylum,	Blackwells,		20,000				20,000				
Wernersville Asylum,	Grays Run,		18,800				18,800				
Totals,		34,600	38,800		100		73,500				
Total costs,		$25.95	$29.10		$0.08		$55.13				
Grand totals (number),		120,300	141,800	78,150	5,100	111,000	456,350				
Grand totals (costs),		$90.23	$106.35	$58.61	$3.83	$83.25	$342.27				

*Two species planted on same area.
†Reenforcement.
‡Cost data not submitted.

Plate 12. A large ant hill. The Department is now investigating damage caused to pitch pines and other pines by ants.

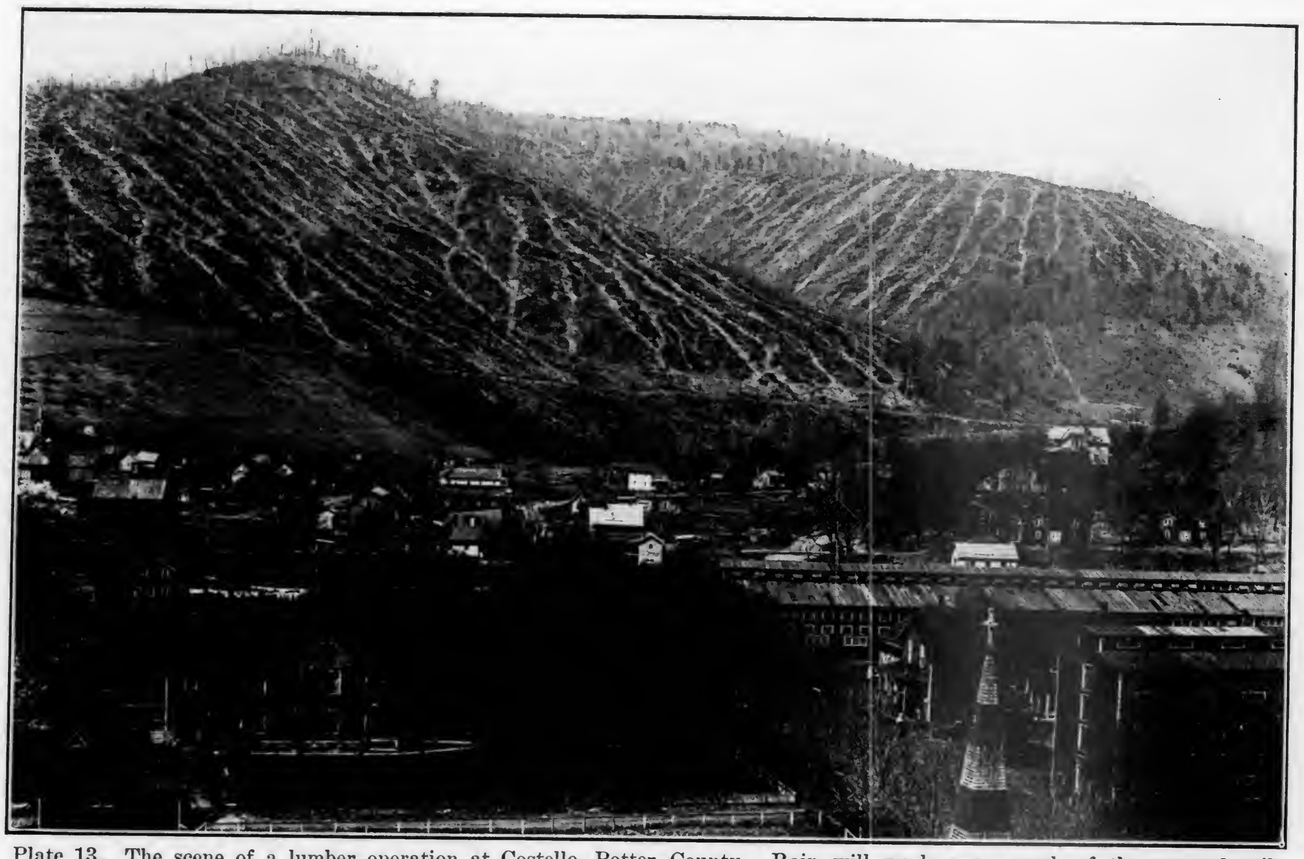

Plate 13. The scene of a lumber operation at Costello, Potter County. Rain will wash away much of the exposed soil. Thousands of acres of land like this in Pennsylvania should be owned and protected by the Commonwealth.

TABLE 32.—SUMMARY OF NURSERY SHIPMENTS, 1917.

Nursery and Consignment.	White Pine.			Scotch Pine.			Pitch Pine.		
	2.	3.	Trans-plants.	2.	3.	Trans-plants.	2.	3.	Trans-plants.
Asaph:									
State Forests,	50,000	100,000	66,600	29,300	17,200		14,100		
Individuals,	19,225	51,200	6,150	37,800	12,750		4,900		
Total,	69,225	151,200	72,750	67,100	29,950		19,000		
Cost,	$103.84	$302.40	$181.88	$100.65	$59.90		$28.50		
Clearfield:									
State Forests,	594,000	1,000		298,500			174,000		
Individuals,	254,450	103,100		137,900			39,700		
Total,	848,450	104,100		436,400			213,700		
Cost,	$1,272.67	$208.20		$654.60			$320.55		
Greenwood:									
State Forests,		230,100		129,000	6,000	2,200			
Individuals,	5,000	23,900	11,800	9,100	150				3,800
Total,	5,000	254,000	11,800	138,100	6,150	2,200			3,800
Cost,	$7.50	$508.00	$41.30	$207.15	$12.30	$4.40			$9.50
Mont Alto:									
State Forests,	135,000	235,000		195,000			153,000		
Individuals,	200,300	305,900		160,000			39,800		
Total,	335,300	540,900		355,000			192,800		
Cost,	$502.95	$1,081.80		$532.50			$289.20		
Small Nurseries:									
State Forests,	89,200	79,800	19,060	133,500	11,000	11,900	37,600	56,700	34,440
Individuals,			3,100			100			
Total,	89,200	79,800	22,160	133,500	11,000	12,000	37,600	56,700	34,440
Cost,	$133.80	$159.60	$62.60	$200.25	$22.00	$22.35	$56.40	$113.40	$86.10
Total number,	1,347,175	1,130,100	106,710	1,130,100	47,100	14,200	463,100	56,700	38,240
Total costs,	$2,020.76	$2,260.00	$286.18	$1,695.15	$94.20	$26.75	$694.65	$113.40	$95.60

TABLE 32.—Continued.

Nursery and Consignment.	Norway Spruce.			European Larch.	*Miscellaneous Conifers.	Sugar Maple.	White Ash.	†Miscellaneous Hardwoods.	Totals.	
	2.	3.	Transplants.	2.	2.	1-1.	1-1.	2.		
Asaph:										
State Forests,		110,000		27,000					414,200	
Individuals,		16,600	3,200	29,600	5,400	2,900	500	1,654	191,879	
Total,		126,600	3,200	56,600	5,400	2,900	500	1,654		606,079
Cost,		$253.20	$8.00	$84.90	$8.10	$8.70	$1.50	$2.56		$1,144.13
Clearfield:										
State Forests,	25,500			81,800					1,174,800	
Individuals,	6,100			114,500					655,750	
Total,	31,600			196,300						1,830,550
Cost,	$47.40			$294.45						$2,797.87
Greenwood:										
State Forests,		87,900	2,500		8,500		6,000		476,000	
Individuals,		34,300	6,500	1,225	17,750	12,200	13,700		135,625	
Total,		122,200	9,000	1,225	26,250	12,200	19,700			611,625
Cost,		$244.40	$27.00	$3.68	$51.23	$36.60	$59.10			$1,212.16
Mont Alto:										
State Forests,		125,000			15,000				858,000	
Individuals,		50,600		730	5,500				762,930	
Total,		175,600		730	20,500					1,620,930
Cost,		$351.20		$1.10	$30.75					$2,789.90
Small Nurseries:										
State Forests,	43,800	118,600	2,633	11,275	387		22,225	600	672,720	
Individuals,					13				3,213	
Total,	43,800	118,600	2,633	11,275	400		22,225	600		675,933
Cost,	$65.70	$237.20	$7.71	$20.11	$1.80		$33.38	$1.20		$1,223.59
Total number,	75,400	543,000	14,833	268,130	52,550	15,100	42,425	2,254		5,345,117
Total costs,	$113.10	$1,086.00	$42.71	$404.23	$91.88	$45.30	$93.98	$3.76		$9,167.65

*Includes Japanese Larch, Douglas Fir, Red Pine.
†Includes Honey Locust, Red Oak, Chinese Chestnut.
Note:—These totals include 10,000 trees; value, $17.00, which were shipped to individuals, but lost in transit.

TABLE 33.—SEEDLINGS FURNISHED TO INDIVIDUALS FROM STATE FOREST NURSERIES, 1910-1917 INCLUSIVE.

Year.	White Pine.	Scotch Pine.	Red Pine.	Pitch Pine.	Norway Spruce.	European Larch.	Japanese Larch.	Douglas Fir.	White Ash.	Black Walnut.	Sugar Maple.	Red Oak.	Honey Locust.	Black Cherry.	Mixed Hardwoods.	Willow and Privet.	Totals.
1910,	44,450				10,000				2,100	1,555	2,274	1,600	50	25	970	3,350*	66,374
1911,	16,290	121			4,265	915		10	318	1,250	200	310	200	260	721	500†	25,360
1912,	25,850	300			12,100	200			1,204		200	25,000	2,000				66,854
1913,	18,962	437	5,300	325	12,750	930		10	2,766	540	1,750	75	2,800	100	150	875*	47,770
1914,	87,580	1,950	3,515		3,555	500		1,410		1,625	250		1,200	500	1,350	250* 5,000†	108,685
1915,	63,035	2,820	16,781	524	21,935	3,239		3,750	30		150	2,531	300	406	76		115,577
1916,	1,011,310	147,210		41,535	116,090	11,430			52,460		33,200		35,190	3,950	1,900	600* 17,000†	1,471,875
1917,	977,725	356,300	13	83,400	116,360	146,055	25,700	2,950	14,200		15,100		1,650		4	100* 73,500†	1,812,997
Totals,	2,245,202	509,138	25,609	125,784	296,995	163,269	25,700	8,130	73,078	4,970	53,124	29,516	43,390	5,241	5,171	101,175	3,715,492

*Privet cuttings.
†Willow cuttings.

TABLE 34.—STATE FOREST PLANTING, 1917. NUMBER OF SEEDLINGS PLANTED, AREA AND COSTS.

Forest.	Number of Plan.		Number Seedlings Planted.		Area Treated.		Value of Seedlings.		Cost of Planting.		Total Cost of Planting.		Value of seedlings per M.	Cost of planting per M.	Cost of Planted Area Per Acre.	
	New.	Reenforcements.	New.	Reenforcements.	New.	Reenforcements.	New.	Reenforcements.	New.	Reenforcements.	New.	Reenforcements.			New.	Reenforcements.
Austin,	3	1	173,100	7,000	110.2	83.4	$336 25	$14 00	$546 52	$25 80	$882 77	$39 80	$1 94	$3 18	$8 01	$0 48
Barree,	1	--------	13,500	--------	4.5	--------	20 25	--------	51 50	--------	71 75	--------	1 50	3 81	11 44	--------
Bear Meadows,	5	--------	20,000	--------	12.6	--------	31 50	--------	107 42	--------	138 92	--------	1 58	5 37	11 02	--------
Bedford,	2	--------	3,000	--------	2.0	--------	5 00	--------	14 46	--------	19 46	--------	1 67	4 82	9 73	--------
Black Forest,	1	--------	185,000	--------	171.0	--------	299 00	--------	691 37	--------	990 37	--------	1 62	3 74	5 79	--------
Blackwells,	1	--------	180,000	--------	97.2	--------	332 50	--------	853 44	--------	1,185 94	--------	1 85	4 74	12 20	--------
Brumbaugh,	2	--------	70,000	--------	103.3	--------	122 50	--------	418 64	--------	541 14	--------	1 75	5 98	5 24	--------
Buffalo,	2	1	249,600	2,400	264.0	7.8	630 20	4 80	1,437 03	8 50	2,067 23	13 30	1 80	4 11	7 80	1 70
Caledonia,	4	1	117,300	1,750	75.6	6.9	188 45	7 00	558 05	32 48	746 50	39 48	1 64	4 96	10 40	5 72
Greenwood,	--------	6	--------	32,000	--------	27.5	--------	54 40	--------	106 88	--------	161 28	1 70	3 34	--------	5 86
Hull,	3	--------	118,025	--------	78.3	--------	209 68	--------	304 65	--------	514 33	--------	1 78	2 58	6 57	--------
Karthaus,	1	--------	100,000	--------	58.8	--------	184 50	--------	388 76	--------	573 26	--------	1 85	3 89	9 75	--------
Kettle Creek,	1	5	74,450	9,500	58.3	90.3	146 87	16 00	403 34	51 89	550 21	67 89	1 94	5 42	9 44	75
Loyalsock,	1	--------	15,000	--------	6.3	--------	27 50	--------	117 85	--------	145 35	--------	1 83	7 86	23 07	--------
Lushbaugh,	1	--------	88,200	--------	61.1	--------	177 30	--------	321 36	--------	498 66	--------	2 01	3 64	8 16	--------
McClure,	2	1	30,700	12,300	19.4	6.7	46 05	18 45	132 70	46 11	178 75	64 56	1 50	5 82	9 21	9 64
McElhattan,	1	--------	230,000	--------	103.2	--------	370 00	--------	1,268 44	--------	1,638 44	--------	1 61	5 52	15 88	--------
Medix,	1	1	78,675	325	36.3	1.3	130 25	65	211 40	4 00	341 71	4 65	1 66	2 74	9 42	3 58
Minisink,	1	--------	20,000	--------	5.8	--------	30 00	--------	161 19	--------	191 19	--------	1 50	8 05	32 96	--------
Mont Alto,	1	--------	86,000	--------	63.5	--------	129 00	--------	367 21	--------	496 21	--------	1 50	4 27	7 81	--------
Nittany,	2	--------	64,100	--------	29.7	--------	117 20	--------	219 32	--------	336 52	--------	1 83	3 42	1 13	--------
Ole Bull,	7	2	286,800	18,400	261.7	250.3	590 55	27 60	1,043 19	49 69	1,543 74	77 29	1 73	3 58	5 90	31
Penfield,	1	--------	41,700	--------	33.5	--------	83 40	--------	184 63	--------	268 03	--------	2 00	4 43	8 00	--------
Penn,	1	--------	400,400	--------	225.0	--------	601 80	--------	1,094 33	--------	1,696 13	--------	1 50	2 73	7 54	--------
Pine Grove,	2	--------	57,400	--------	32.9	--------	86 10	--------	114 25	--------	200 35	--------	1 50	2 00	6 09	--------
Pocono,	1	--------	45,500	--------	28.7	--------	84 50	--------	205 57	--------	290 07	--------	1 86	4 52	10 11	--------
Promised Land,	1	--------	75,000	--------	89.2	--------	135 00	--------	245 30	--------	380 30	--------	1 80	3 27	4 27	--------
Rothrock,	1	--------	5,500	--------	2.0	--------	15 00	--------	21 86	--------	36 86	--------	2 73	3 97	18 43	--------
Seven Mountains,	2	--------	60,495	--------	46.0	--------	101 22	--------	179 25	--------	280 47	--------	1 67	2 96	6 10	--------
Sinnemahoning,	--------	2	50,000	--------	28.9	--------	93 60	--------	229 15	--------	322 75	--------	1 87	4 58	11 17	--------
Sizerville,	2	--------	100,000	--------	97.6	--------	150 00	--------	270 99	--------	420 99	--------	1 50	2 71	4 32	--------
Snow Shoe,	1	--------	55,200	--------	18.5	--------	95 83	--------	334 61	--------	430 44	--------	1 74	6 06	23 27	--------
Stone,	1	--------	72,200	--------	40.5	--------	130 40	--------	373 02	--------	503 42	--------	1 81	5 17	12 43	--------
Stuart,	3	--------	200,000	--------	93.8	--------	300 00	--------	952 59	--------	1,252 59	--------	1 50	4 76	13 35	--------
Tea Spring,	1	--------	4,000	--------	2.0	--------	6 00	--------	9 78	--------	15 78	--------	1 50	2 44	7 89	--------
Whetham,	2	--------	23,500	--------	10.8	--------	43 28	--------	113 53	--------	156 81	--------	1 84	4 83	14 52	--------
White Deer,	2	--------	17,700	--------	40.7	--------	35 00	--------	145 44	--------	180 44	--------	1 98	8 22	4 43	--------
	66	18	3,512,045	83,675	2,412.9	474.2	$5,995 68	$142 90	$14,092 20	$325 35	$20,087 88	$468 25	$1 71	$3 73	$7 91	$0 99

TABLE 35.—STATE FOREST PLANTING.—SUMMARY BY YEARS. SPECIES AND NUMBER.

Year.	White Pine.	Red Pine.	Scotch Pine.	Pitch Pine.	European Larch.	Norway Spruce.	Mixed Conifers.*	White Ash.	Red Oak.	White Oak.	Black Cherry.	Sugar Maple.	Black Walnut.	Honey Locust.†	Mixed hardwoods.‡	Totals.
1899,															1,000	1,000
1900,															1,500	1,500
1902,	5,000															5,000
1903,	1,600															1,600
1904,	3,000													675	4,025	7,700
1905,	25,000							3,000		6,000					6,000	40,000
1906,	85,700							6,500					150	7,200		99,550
1907,	25,000							5,000		350				3,000	5,580	38,930
1908,	70,800					11,900	4,035	7,986					950		4,957	100,628
1909,	588,375		74,404		7,525	5,725	5,800	27,697					5,400		23,535	738,461
1910,	777,289		70,925		8,852	12,000	152	105,595	4,891	6,025	450	21,525	16,690	41,075	26,744	1,092,213
1911,	1,407,304		77,076	21,500	600	1,600	600	54,825	53,150	1,775	26,750	10,057	511	525	7,388	1,633,661
1912,	1,335,247		152,900		13,025	120,490	15,606	18,910	199,136	250	1,407	1,320	1,180	3,900	27,039	1,890,404
1913,	2,536,595	63,805	91,050	9,116	10,900	375,841	34,688	18,700	1,800		6,400	4,622	9,970	1,150		3,164,637
1914,	2,494,252	395,900	133,154		22,650	169,969	70,106	6,745		19,150	20,743	8,190	27,118	16,225	9,375	3,393,571
1915,	2,173,235	409,700	18,775	9,600	165,925	1,342,975	33,511		135,900		3,050	1,000	1,065	700	20,000	4,315,436
1916,	3,343,400	24,550	714,950	442,900	68,640	744,570		58,400			5,540	52,400		36,500	170	5,492,020
1917,	1,599,720	387	833,600	473,640	120,075	515,933	23,500	28,225	600							3,595,720
Totals,	16,471,557	894,342	2,166,834	956,756	418,192	3,301,063	187,986*	341,583	395,477	33,550	64,340	99,114	63,034	110,950†	137,313‡	25,642,031

*Includes Japanese Larch, Bull Pine, Silver Pine, Balsam Fir, Douglas Fir, etc.
†Includes 10,900 Black Locust.
‡Includes 31,000 Willow Cuttings; also a number each of American Elm, Carolina Poplar, Catalpa, Hickory, Chestnut, Sycamore, Persimmon, etc.

TABLE 36.—STATE FOREST PLANTING. SUMMARY BY YEARS.

Number of Seedlings Planted, Area, and Costs.

Year.	Number of Plantings Made.		Number Seedlings Planted.		Area Treated (Acres).		Cost of seedlings.	Cost of planting.	Total cost of plantation.	Average per M for planting seedlings.	Average Cost Per Acre for Planted Area.	
	New plantations.	Reenforcements.	New plantations.	Reenforcements.	New plantations.	Reenforcements.					New plantations.	Reenforcements.
1899,	1		1,000		.5			$47 70	$47 70	$47 70		
1900,	1		1,500		.8			71 55	71 55	47 70		
1902,	1		5,000		2.5		$50 00	36 45	86 45	7 29	$34 58	
1903,		1		1,600		2.5	9 60	8 50	18 10	5 31		$7 24
1904,	2		7,700		4.5		26 40	28 40	54 80	3 69	12 18	
1905,	2		40,000		24.3		260 00	161 45	421 45	4 04	17 34	
1906,	10		99,550		37.5		487 10	561 68	1,048 78	5 88	27 97	
1907,	8	1	36,930	2,000	17.1	4.5	195 99	68 57	264 56	1 81	15 04	1 64
1908,	21		100,628		48.39		217 30	205 25	422 55	2 04	8 73	
1909,	66	3	733,418	5,043	279.3	4.5	1,625 10	1,521 70	3,146 80	2 06	11 09	10 10
1910,	90	6	971,840	120,373	428.77	73.4	2,649 89	3,367 87	6,017 76	3 08	13 09	7 30
1911,	111	9	1,547,505	116,156	713.48	85.2	3,952 67	4,942 73	8,895 40	2 97	11 71	5 75
1912,	132	19	1,745,722	144,632	857.49	174.4	6,021 00	6,764 67	12,785 67	3 53	13 81	4 84
1913,	118	20	3,101,107	63,530	1,597.56	84.11	9,194 33	10,831 65	20,025 98	3 43	13 17	4 86
1914,	126	25	3,239,256	154,315	2,269.55	182.86	8,329 38	11,656 90	19,986 28	3 43	8 66	4 70
1915,	126	29	4,195,086	120,350	2,718.29	163.62	10,854 67	12,743 75	23,598 42	2 95	8 43	4 58
1916,	105	13	5,445,020	47,000	4,106.1	56.1	8,609 22	16,641 20	25,250 42	3 03	6 10	3 99
1917,	66	18	3,512,045	83,675	2,412.9	474.2	6,138 58	13,417 55	19,556 13	3 73	7 91	99
Totals to 1917,	986	144	24,783,307	858,724	15,459.0	1,305.4	$58,621 23	$83,077 57	$141,698 80	$3 24		

TABLE 37.—STATE FOREST PLANTING. SUMMARY BY FORESTS. 1899 TO 1917, INCLUSIVE.
Species and Number.

Forest.	White Pine.	Pitch Pine.	Red Pine.	Scotch Pine.	European Larch.	Norway Spruce.	Mixed Conifers.	White Ash.	Red Oak.
Austin,	919,403	13,400	15,800	81,150	2,300	243,200	5,150	11,000	10,000
Bald Eagle,	70,000		10,000	15,000		15,000			
Barree,	63,850			16,950		4,000	8,200	3,000	5,000
Bear Meadows,	855,600		25,000	34,400	900			500	30,000
Bedford,	128,682	1,000		7,625	700	1,070	3,387	5,790	5,700
Black Forest,	719,400	106,816	41,000	96,500	25,000	154,900	15,000	7,000	31,650
Blackwells,	762,255	4,800	96,480	107,000	10,350	362,612	9,000	10,500	21,000
Brumbaugh,	85,000			35,000					
Buchanan,	143,700	3,500		5,800	4,150	82,800	5,200	5,300	13,500
Buffalo,	783,300	33,500	10,000	148,000	3,000	151,800		32,400	5,000
Caledonia,	382,227	10,800	21,750	84,116	46,050	135,750		22,840	
Chatham,	333,720		7,900	13,961	11,500	62,300	5,750	11,635	35,000
Clearfield,	193,100		52,000		1,000	67,000			
Grays Run,	96,300					60,900		2,000	22,400
Greenwood,	436,483	77,300	85,800	136,000	2,100	30,100	5,400	17,916	10,786
Hopkins,	351,470	24,320		55,000	10,000	51,500	11,400	8,500	
Hull,	462,030	34,330	20,000	141,150	13,940	1,470	6,100	10,025	3,000
Jacks Mountain,	525		25	500			200		
Karthaus,	592,900			31,000	12,100	192,000	1,000		
Kettle Creek,	381,250	29,500	19,000	10,400	29,150	99,550	10,000	5,000	10,000
Kishacoquillas,	296,000		10,000	5,000	1,000	4,000			8,500
Loyalsock,	47,800			5,000	5,000	5,000			
Lushbaugh,	294,300	30,600	20,000	30,000		76,500	2,000	6,000	7,000
McClure,	182,700			10,500	15,000	5,000			
McElhattan,	528,750	60,500	23,200	172,700	4,500	50,000		10,825	8,500
Medix,	175,900	46,800	15,000	71,000	17,200	33,000		2,000	
Minisink,	36,000			5,000			350		
Mont Alto,	652,575	68,000	9,000	108,400	6,000	45,900	7,761	17,186	5,700
New Bergen,	714,200	50,500	76,000	51,400	47,500	235,600	1,300		
Nittany,	285,400	23,200		43,200	4,525	25	250		
Ole Bull,	890,900	54,200	55,000	130,655	30,600	178,900	29,700	42,200	40,000
Penfield,	517,800	15,350	75,800	69,600	40,500	247,400	23,500	8,000	2,000
Penn,	698,000	200,000	13,377	72,000		23		20,500	20,000
Pennypacker,	224,200			1,550		3,000	500	27,900	35,000
Pine,	312,700		10,000	2,000	2,250	100,000	2,400	5,000	50
Pine Grove,	154,400		1,300	4,500		137,500	9,400	6,000	15,350
Pocono,	45,375	13,000		11,133		27,125	650		
Promised Land,	172,800					45,000		9,175	900
Rothrock,	251,662		40,000	19,500		95,148	3,000	1,000	
Seven Mountains,	239,060	13,240	25,010	24,900	2,225	9,360	1,200		10,000
Sinnemahoning,	110,840			55,000	5,000	40,000			
Sizerville,	496,900		27,000	80,000	10,000				
Slate Run,	25,000		16,000			5,000			20,000
Snow Shoe,	80,450			20,000	7,000	18,750			
Stone,	190,200	23,100	7,200	52,144	23,327	61,870	4,038	24,391	9,141
Stuart,	703,500	14,400	10,000	63,600	20,900	69,100	2,000		
Tea Spring,	52,000			2,000		2,000			
Whetham,	139,750	4,800		31,300	3,100	45,050	6,150	8,000	5,000
White Deer,	121,500	400	5,000	5,200	325	36,200	8,000		5,300
Young Womans Creek,	158,700		50,000			8,600			
Totals,	16,470,557	957,356	893,742	2,166,834	418,192	3,301,003	187,986	341,583	395,477

TABLE 37.—Continued.

Forest.	White Oak.	Black Walnut.	American Elm.	Sugar Maple.	Black Cherry.	Honey Locust.	Carolina Poplar.	Mixed Hardwood.	Totals.
Austin,						6,000			1,307,503
Bald Eagle,		220							110,220
Barree,	2,000	3,000							106,000
Bear Meadows,			500			4,125		25,000	976,025
Bedford,		1,011		1,550		2,000	280	500	159,295
Black Forest,									1,197,266
Blackwells,		3,138			2,850	5,000			1,394,985
Brumbaugh,									120,000
Buchanan,	4,000	3,335	100					2,763	274,148
Buffalo,	2,000			22,400					1,191,400
Caledonia,		150				7,700	9,800		721,183
Chatham,			493	470	6,907	500	218	5,097	495,451
Clearfield,							1,000		314,100
Grays Run,				400		400			182,400
Greenwood,		1,175		15,000	170		5,000	991	824,221
Hopkins,						2,000			514,190
Hull,		2,000	2,400	1,850	1,090	21,000		170	720,555
Jacks Mountain,				8,000					9,250
Karthaus,									739,000
Kettle Creek,									593,850
Kishacoquillas,									324,500
Loyalsock,			3,000		1,300				67,100
Lushbaugh,					3,000				469,400
McClure,									213,200
McElhattan,		1,850		5,832		125			866,782
Medix,				2,000		2,000			364,900
Minisink,							2,500	1,000	44,850
Mont Alto,	21,500	12,150			3,700	8,025	1,000	18,455	985,352
New Bergen,					950				1,177,450
Nittany,									356,600
Ole Bull,			3,350	1,468	20,573	11,550			1,489,096
Penfield,	1,775		5,000		5,700				1,012,425
Penn,		12,000		7,000					1,042,900
Pennypacker,	2,025	3,170				2,575	1,400		301,320
Pine,			20,250		2,300	6,325		50	463,325
Pine Grove,		3,000							331,450
Pocono,		70						60	97,415
Promised Land,			200	11,722					239,797
Rothrock,		16,675			2,000	17,375			446,360
Seven Mountains,				2,500					327,425
Sinnemahoning,						5,000			215,840
Sizerville,			3,000			2,000			618,900
Slate Run,						1,000			67,000
Snow Shoe,							125		126,325
Stone,	250	90	13,089	1,300	11,700	6,250	4,622	900	433,612
Stuart,					1,200				884,700
Tea Spring,			5,000						61,000
Whetham,				7,622	900				251,672
White Deer,				10,000					191,925
Young Womans Creek,									217,300
Totals,	33,550	63,034	56,382	99,114	64,340	110,950	25,945	54,986	25,641,031

TABLE 38.—STATE FOREST PLANTING. SUMMARY BY FORESTS, 1899-1917 INCLUSIVE.

Number of Seedlings Planted, Area and Costs.

Forest.	Year.	Number of Plantings Made.		Number Seedlings Planted.		Area Treated (Acres).		Cost of seedlings.	Cost of planting.	Total cost of plantations.	Cost per M for planting seedlings.	Cost per Acre for Planted Area.	
		New plantations.	Reenforcements.	New plantations.	Reenforcements.	New plantations.	Reenforcements.					New plantations.	Reenforcements.
Austin,	1910-17	20	1	1,300,503	7,000	781.67	83.4	$3,213 65	$3,647 03	$6,860 68	$2 79	$8 73	$0 48
Bald Eagle,	1912-15	5	1	106,220	4,000	39.5	7.0	305 34	393 45	698 79	3 57	17 69	4 28
Barree,	1909-17	19	3	97,410	8,590	36.5	19.7	245 84	307 82	553 66	2 90	14 02	2 13
Bear Meadows,	1909-17	42	14	689,935	286,090	238.1	295.0	2,143 94	1,846 27	3,990 21	1 89	11 13	4 36
Bedford,	1908-17	39	1	158,770	525	73.06	.9	444 59	684 04	1,128 63	4 29	15 40	4 00
Black Forest,	1910-17	11	----------	1,197,266	----------	1,183.8	.0	2,233 87	3,683 20	5,917 07	3 08	5 00	--------
Blackwells,	1910-17	31	1	1,389,985	5,000	965.43	4.2	3,189 56	4,351 66	7,541 22	3 12	7 79	5 90
Brumbaugh,	1908-17	3	1	105,006	15,000	114.8	11.5	246 25	576 53	822 78	4 80	6 06	11 08
Buffalo,	1910-17	17	1	1,189,009	2,400	635.75	7.8	2,363 23	4,539 97	6,963 20	3 81	16 84	1 71
Buchanan,	1909-16	29	7	263,880	10,268	162.93	12.35	814 97	726 25	1,541 22	2 65	8 92	7 10
Caledonia,	1906-17	50	11	706,625	14,558	360.82	35.54	1,890 82	2,863 40	4,754 22	3 97	12 78	4 00
Chatham,	1908-16	32	3	483,848	11,603	345.2	15.7	1,027 90	1,296 82	2,324 72	2 62	6 55	3 98
Clearfield,	1909-15	7	1	290,100	24,000	94.5	44.2	905 39	1,080 79	1,986 18	3 44	19 89	2 42
Grays Run,	1911-16	39	8	162,599	19,810	78.5	9.97	395 33	543 64	938 97	2 98	9 70	17 78
Greenwood,	1905-17	56	34	619,568	204,653	269.3	203.2	2,267 41	1,968 89	4,236 30	2 39	12 04	4 89
Hopkins,	1904-16	11	1	512,190	2,000	273.2	3.0	1,216 96	2,932 11	4,149 07	5 70	15 07	10 96
Hull,	1911-17	28	1	718,555	2,000	439.3	.7	1,582 16	2,283 64	3,865 80	3 17	8 78	10 80
Jacks Mountain,	1909-16	5	----------	9,250	----------	3.54	.0	22 60	49 43	72 03	5 34	20 35	--------
Karthaus,	1912-17	3	----------	739,000	----------	329.03	.0	2,312 90	2,318 97	4,631 87	3 14	14 08	--------
Kettle Creek,	1910-17	19	5	584,350	9,500	419.7	90.3	1,306 12	1,912 80	3,218 92	3 22	7 51	75
Kishacoquillas,	1910-15	37	5	296,250	28,250	148.58	50.7	812 99	840 69	1,653 68	2 59	10 28	2 48
Loyalsock,	1911-17	7	2	62,800	4,300	24.65	3.1	158 27	512 68	670 95	7 64	25 68	12 22
Lushbaugh,	1910-17	21	2	452,200	17,200	276.4	15.8	1,087 95	2,175 99	3,263 94	4 63	11 44	6 42
McClure,	1911-17	9	3	168,700	44,500	92.7	28.4	541 92	1,140 93	1,682 85	5 35	14 19	12 92
McElhattan,	1911-17	9	----------	863,782	----------	498.2	.0	1,801 86	2,644 32	4,446 18	3 05	8 92	--------
Medix,	1913-17	8	1	364,575	325	216.6	1.3	862 90	1,160 48	2,023 38	3 18	9 32	3 57
Minisink,	1899-17	11	----------	44,850	----------	12.75	.0	80 71	444 78	525 49	9 91	41 21	--------
Mont Alto,	1902-17	59	5	967,252	18,100	598.29	16.4	2,257 40	2,926 29	5,183 69	2 97	8 43	8 51
New Bergen,	1913-17	5	----------	1,177,450	----------	968.4	.0	2,681 08	3,087 99	5,769 07	2 62	5 96	--------
Nittany,	1909-17	19	5	342,400	14,200	175.93	11.39	649 07	1,016 06	1,635 13	2 85	9 11	5 46
Ole Bull,	1910-17	31	2	1,470,696	18,400	1,274.23	250.3	3,168 70	4,431 84	7,600 54	2 98	5 90	31
Penfield,	1909-17	16	1	1,001,825	10,600	654.1	8.4	2,421 50	3,430 80	5,852 30	3 39	8 87	5 96
Penn,	1910-17	11	----------	1,042,909	----------	471.9	.0	2,123 18	2,731 94	4,855 12	2 62	10 29	--------
Pennypacker,	1910-15	31	10	257,920	43,400	131.41	39.26	722 71	742 57	1,465 28	2 46	8 93	7 43
Pine,	1909-16	28	3	455,975	7,350	303.85	14.9	1,111 27	1,826 20	2,937 47	3 94	9 51	3 30
Pine Grove,	1913-17	11	----------	331,450	----------	135.13	.0	763 99	502 17	1,263 16	1 52	9 37	--------
Pocono,	1908-17	15	2	95,213	2,200	67.47	1.78	260 67	583 03	843 70	5 99	12 23	10 35
Promised Land,	1911-17	12	----------	239,797	----------	194.9	.0	518 09	675 51	1,193 60	2 82	6 12	--------
Rothrock,	1911-17	20	2	433,060	13,300	232.22	14.3	1,176 94	1,384 49	2,561 43	3 12	10 71	5 24
Seven Mountains,	1911-17	25	----------	327,495	----------	204.13	.0	742 90	768 41	1,511 31	2 35	7 40	--------
Sinnemahoning,	1915-17	7	----------	215,840	----------	100.5	.0	367 91	812 68	1,180 59	3 77	11 75	--------
Sizerville,	1910-17	13	----------	618,900	----------	500.9	.0	1,286 80	1,601 78	2,888 58	2 59	5 77	--------
Slate Run,	1911-14	2	----------	67,000	----------	49.3	.0	227 04	214 55	441 59	3 20	8 96	--------
Snow Shoe,	1913-17	5	----------	126,325	----------	47.75	.0	274 33	818 53	1,092 86	6 48	22 88	--------
Stone,	1908-17	38	7	424,010	9,602	199.8	4.9	1,019 83	1,632 26	2,682 09	3 83	13 09	13 58
Stuart,	1910-17	22	----------	884,700	----------	488.8	.0	1,692 04	3,390 00	5,082 04	3 83	10 40	--------
Tea Spring,	1911-17	13	----------	61,000	----------	35.32	.0	150 60	192 26	342 86	3 15	9 70	--------
Whetham,	1910-17	13	----------	251,672	----------	129.6	.0	560 48	1,082 99	1,643 47	4 30	12 68	--------
White Deer,	1910-17	15	----------	191,925	----------	251.9	.0	420 42	1,005 72	1,426 14	5 24	5 66	--------
Young Womans Creek,	1913-16	7	----------	217,300	----------	127.02	.0	524 85	1,262 92	1,787 77	5 81	14 07	--------
Total,	----------	986	144	24,782,307	858,724	15,457.73	1,305.39	$58,597 23	$83,077 57	$141,674 80	$3 24	$8 89	$3 26

TABLE 39.—STATE FOREST PLANTING. WILLOW CUTTINGS IN HOLTS. SUMMARY BY FORESTS, 1910-1917, INCLUSIVE.

Forest.	Year.	No. of Cuttings.	Total Cost.
Bear Meadows,	1911	2,000	$8 56
Black Forest,	1917	17,000	34 95
Blackwells,	1911-15	35,000	115 13
Buchanan,	1911-12	4,000	10 99
Buffalo,	1916-17	33,400	112 20
Caledonia,	1910	4,000	26 18
Chatham,	1911	2,000	9 62
Grays Run,	1912-14	22,750	115 62
Greenwood,	1917	18,700	68 04
Kishacoquillas,	1911-17	164,950	290 32
Medix,	1916	500	4 63
Nittany,	1917	63,000	229 68
Pennypacker,	1911-13	6,500	19 85
Penfield,	1916-17	10,300	31 73
Pine Grove,	1916	199,550	173 31
Promised Land,	1915-17	111,150	378 40
Rothrock,	1911	5,000	9 25
Slate Run,	1911	500	4 10
Stone,	1911	1,800	13 87
Stuart,	1917	4,000	15 10
Tea Spring,	1911	1,000	5 35
Totals,		617,100	$1,676 88

TABLE 40.—STATE FOREST PLANTING. WILLOW CUTTINGS IN HOLTS. SUMMARY BY YEARS.

Year.	No. of Cuttings.	Total Cost.
1910,	4,000	$26 18
1911,	16,800	85 22
1912,	24,000	46 70
1913,	8,300	34 81
1914,	13,750	98 23
1915,	33,950	104 38
1916,	133,950	251 56
1917,	382,850	1,029 80
Totals,	617,100	$1,676 88

TABLE 41.—TREES PLANTED AND LIVING, FALL, 1916. STATE FOREST PLANTATIONS.

Year Planted.	1899-1904.		1905.		1906.		1907.		1908.		1909.		1910.		1911.	
Forest.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.
Austin,													73,000	52,490	66,700	58,550
Bald Eagle,											38,000	26,300	25,000	10,500	5,000	4,390
Barree,											129,000	39,900	165,025	45,300	317,000	169,300
Bear Meadows,											7,025	4,360	38,652	8,700	39,168	25,800
Bedford,									1,035	285			7,500	2,767	6,000	
Black Forest,													15,500	9,690	55,000	42,850
Blackwells,																
Brumbaugh,									35,000	24,700						
Buffalo,													32,000	400	17,000	7,630
Buchanan,									800	60	5,400	1,590	11,000	6,660	8,328	20,580
Caledonia,							25,500	21,700	968		12,270	1,800			35,588	18,250
Chatham,											5,631				42,800	
Clearfield,											1,000					
Grays Run,															6,300	110
Greenwood,			25,000	20,000	39,000	15,900					199,466	81,390	32,363	11,000	121,900	48,450
Hopkins,									1,937		2,000	1,900	10,500	2,630	55,000	29,900
Hull,															13,000	6,490
Jacks Mountain,											1,200	850				
Karthaus,																
Kettle Creek,																
Kishacoquillas,													5,500	4,800	10,500	7,490
Loyalsock,															200,000	144,045
Lushbaugh,															10,000	2,460
McClure,													5,000	4,900	31,000	16,000
McElhattan,															35,000	17,500
Medix,															215,032	156,500
Minisink,	1,000															
Mont Alto, 1899,	1,500															
Mont Alto, 1900,	6,000															
Mont Alto, 1902,	1,600	4,000	15,000	14,300			13,430	6,600	42,986	27,330	1,000	207,110	132,850	108,880	28,000	17,100
Mont Alto, 1903,	7,700	1,000														
Mont Alto, 1904,		2,200														

TABLE 41.—Continued.

Year Planted.	1899-1904.		1905.		1906.		1907.		1908.		1909.		1910.		1911.	
Forest.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.
New Bergen,																
Nittany,																
Ole Bull,											5,000	2,330	53,000	37,000		
Penfield,													47,350	21,440	34,800	33,400
Penn,											5,600	3,130			52,475	18,000
Pennypacker,													229,500	131,720		
Pine,									15,000	10,350	22,500	10,785	38,900	20,375	59,350	30,530
Pine Grove,											5,400	1,218	68,125	35,030	8,850	315
Pocono,																
Promised Land,									650				10,100	8,915		
Rothrock,															15,000	11,800
Seven Mountains,															18,762	13,620
Sinnemahoning,															49,200	27,080
Sizerville,																
Slate Run,													29,000	22,250	39,600	34,900
Snow Shoe,																
Stone,																
Stuart,									1,872	25	45,055	26,890	85,868	60,885	40,710	24,240
Tea Spring,													5,500	4,070	10,000	3,000
Whetham,															10,000	9,200
White Deer,													31,000	16,170		
Young Womans Creek,															10,000	6,750
Totals,	16,800	7,200	40,000	34,360	99,550	56,500	38,930	28,300	100,628	62,787	738,461	409,523	1,092,213	626,572	1,633,631	1,006,500

TABLE 41.—Continued.

Year Planted.	1912.		1913.		1914.		1915.		1916.		Totals.		
Forest.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Per cent.
Austin,	123,600	101,780	159,300	136,190	208,603	127,250	257,200	207,620	240,000	159,570	1,127,403	843,480	74.8
Bald Eagle,			49,210	46,090	57,010	44,470	4,000	3,700			110,220	94,260	85.5
Barree,	6,200	4,400	300	280			18,000	10,800			92,500	56,700	61.3
Bear Meadows,	235,400	124,700	104,000	75,840	30,000	21,040	35,000	14,100			956,025	490,180	51.2
Bedford,	27,087	17,070	20,000	14,400	21,350	19,420			5,000	4,400	156,295	94,435	60.4
Black Forest,			29,816	14,990	241,000	168,000	168,050	74,840	559,900	378,380	1,012,266	638,977	63.1
Blackwells,	87,000	76,920	228,561	197,280	200,074	159,700	263,550	201,140	365,300	316,420	1,214,985	1,004,000	82.6
Brumbaugh,			15,000	12,600							50,000	37,300	74.6
Buffalo,	30,600	28,830	34,400	33,180	73,000	66,970	130,000	123,850	523,000	484,420	839,400	737,659	87.8
Buchanan,	16,035	7,680	40,835	34,850	71,550	56,400	131,500	113,520	6,500	5,100	274,148	226,770	82.4
Caledonia,	6,625	5,200	26,005	17,760	37,545	19,930	177,800	148,340	209,450	164,900	603,133	445,670	73.8
Chatham,	157,027	93,200	142,700	95,920			68,895	58,570	77,400	56,400	495,451	324,200	65.4
Clearfield,	50,100	40,070	131,000	97,750	80,000	56,000	52,000	46,800			314,100	240,620	77.3
Grays Run,	28,900	8,840	29,500	11,800			52,700	33,000	65,000	24,370	182,400	78,120	42.8
Greenwood,	27,446	22,450	75,800	41,470	65,170	43,936	89,375	58,625	114,800	95,840	792,221	439,061	59.2
Hopkins,	72,000	61,960	78,500	65,500	77,800	63,860	67,750	61,000	150,640	135,650	514,190	425,400	84.6
Hull,	21,050	2,690	76,500	71,220	87,800	49,950	107,900	90,700	296,280	259,590	602,530	480,610	79.7
Jacks Mountain,			50	25					8,000	6,000	9,250	6,875	74.3
Karthaus,			346,100	235,810			292,900	162,060			639,000	397,870	62.4
Kettle Creek,	10,000	6,940	100,000	80,000	103,900	67,340	80,000	61,650	200,000	150,300	509,900	378,520	74.2
Kishacoquillas,	41,000	27,550	32,000	27,170	27,000	13,930	24,500	18,720			324,500	231,415	71.3
Loyalsock,	12,100	8,770			20,000	18,700	10,000	9,620			52,100	39,550	75.9
Lushbaugh,	29,900	12,025	50,000	25,650	10,200	9,476	95,100	71,430	160,000	127,530	381,200	267,011	70.0
McClure,	25,000	11,710			50,000	36,300	24,700	19,720	35,500	18,350	170,200	97,580	57.3
McElhattan,			85,000	70,500	56,250	41,310	15,500	9,520	265,000	218,800	636,782	496,639	77.9
Medix,			47,200	19,790	58,000	43,820	84,700	34,760	96,000	68,500	285,900	163,870	58.3
Minisink,	1,000	950	5,000	4,750					15,000	14,250	24,850	19,987	80.5
Mont Alto,	42,175	34,910	61,900	39,990	103,150	75,190	92,611	73,465	100,000	84,090	899,352	696,225	78.5
New Bergen,			337,300	283,200			429,100	362,200	411,050	357,850	1,177,450	1,003,250	85.2
Nittany,					40,000	26,820	25,000	15,000	169,500	123,700	292,500	204,850	70.0
Ole Bull,	260,700	224,900	2,000	850	457,846	218,900			381,200	319,630	1,183,896	819,120	69.1
Penfield,	173,000	147,260	127,800	102,400	156,400	36,710	297,000	263,910	158,450	138,480	970,725	709,899	73.1
Penn,	80,000	61,350	100,000	98,000	123,000	103,900	110,000	98,000			642,500	492,970	76.7

TABLE 41.—Continued.

Year Planted.	1912.		1913.		1914.		1915.		1916.		Totals.		
Forest.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Planted.	Living.	Per cent.
Pennypacker,	41,780	12,700	50,000	29,750	53,600	44,720	20,190	17,330			301,320	176,540	58.5
Pine,	41,450	13,380	45,000	33,940	100,000	74,000	117,200	74,100	77,300	52,630	463,325	284,913	61.4
Pine Grove,			50,000	300	9,500	2,250	141,550	112,480	73,000	60,800	274,050	175,830	64.1
Pocono,	6,160	4,275	1,500	300	26,653	4,240	6,856	5,780			51,913	23,510	45.2
Promised Land,	15,100	12,460	19,175	8,500	25,522	21,960	25,000	23,750	65,000	59,500	164,797	137,970	83.7
Rothrock,	62,500	56,370	140,375	92,020	115,723	77,260	103,500	70,870			440,860	310,140	70.3
Seven Mountains,			25,000	20,390	60,500	49,910	117,000	92,510	15,300	13,800	267,000	206,690	77.1
Sinnemahoning,							24,440	21,700	141,400	71,350	165,840	93,050	56.1
Sizerville,			102,000	86,040	95,050	74,720	153,300	125,180	100,000	87,500	518,900	430,590	82.9
Slate Run,	41,000	7,000			26,000	9,600					67,000	16,600	24.7
Snow Shoe,			10,000	8,700	35,125	28,704	26,000	21,060			71,125	58,464	82.2
Stone,	72,669	49,850	51,088	32,700	19,960	15,920	25,600	16,990	18,650	14,920	361,412	242,300	67.4
Stuart,	7,300	1,800	50,000	38,150	100,000	68,430	193,500	151,570	318,400	228,930	684,700	495,950	73.4
Tea Spring,	5,000	250	9,000	7,530	25,000	14,500	8,000	6,850			57,000	38,330	67.2
Whetham,	35,000	29,680	40,122	22,540	51,800	14,540	76,250	55,790			228,172	138,120	60.5
White Deer,	4,700	2,350	3,600	3,050	68,000	63,000	47,925	39,735	40,000	37,000	174,225	154,885	88.9
Young Womans Creek,			32,000		125,000	102,050	30,300	25,750	30,000	27,000	217,300	154,800	71.2
Totals,	1,890,004	1,321,670	3,164,637	2,339,165	3,393,971	2,255,126	4,315,436	3,368,075	5,492,020	4,365,950	22,046 311	15,821,728	71.8

TABLE 42.—AVERAGE HEIGHTS OF TREES IN YOUNG PLANTATIONS, FALL, 1916. SPECIES ON DIFFERENT SITES. HEIGHTS IN FEET AND TENTHS.

Age of Trees from Seed (Yrs.)	White Pine. El. 1,600 ft. Exp. S. E. Sandy loam. Old field. Seedlings 2 yrs. "A"	White Pine. El. 1,500 ft. Exp. north. Dry sandy soil. Brush land. Seedlings 2 yrs.	Scotch Pine. Exp. N. W. Shallow loam. Grass and brush land. Seedlings 2 yrs.	Scotch Pine. El. 900 ft. Exp. S. E. Moist sandy loam. Old field. Seedlings 2 yrs.	Scotch Pine. El. Exp. S. E. Moist shallow soil. Old field. Seedlings 2 yrs.	Pitch Pine. El. 2,000 ft. Level sandy soil. Scrub oak area. Seedlings 2 yrs.	Pitch Pine. El. 2,000 ft. Exp. west. Sandy loam. Old field. Seedlings 2 yrs.	Bull Pine. El. 950 ft. Sandy soil. Old field. Seedlings 2 yrs.	Bull Pine. El. 1,000 ft. Shale soil. Old field. 2-1. Transplants.	Jack Pine. El. 800 ft. Exp. S. W. Sandy loam. Old field. Seedlings 2 yrs. "B"	European Larch. El. 900 ft. Exp. S. E. Moist sandy loam. Old field. Seedlings 2 yrs.	European Larch. El. 1,100 ft. Exp. west. Dry sandy loam. Grass and brush land. Seedlings 3 yrs.	Japanese Larch. Exp. S. W. Red shale soil. Brush land. Seedlings 2 yrs.	Japanese Larch. El. 750 ft. Exp. N. E. Deep sandy loam. Brush land cleared. Seedlings 2 yrs. "C"	Norway Spruce. Exp. S. E. Red shale soil. Field. Seedlings 3 yrs.	Norway Spruce. El. 700 ft. Exp. east. Sandy loam. Cleared previous to planting. Transplants 4 yrs. "D"	Douglas Fir. El. 750 ft. Exp. N. E. Sandy loam well drained. Field. Trees 7 yrs. Planted 1915. "E"	White Ash. El. 1,140 ft. Exp. east. Heavy sandy loam. Field. Spaced 5x5. Seedlings 2 yrs. "F"	White Ash. El. 1,000 ft. Exp. east. Sandy soil. Field. Seedlings 1 yr.	Black Walnut. El. 950 ft. Exp. east. Sandy loam. Field. Seedlings 1 yr. Spaced 5x5.	Black Cherry. El. 1,138 ft. Exp. west. Dry shallow sandy loam. Sod and brush. Seedlings 1 yr.
1,																			.3	.3	
2,						.6		.4											.5	.6	.3
3,	.4	.2	.6	.7		.9	.5	.7			.5				.3		.7		.8	.8	.4
4,	.6	.4	1.0	1.0	1.4	1.5	.7	1.1			.7	1.0	1.4		.3		.9	1.9	1.1	1.2	.5
5,	1.2	.6	1.7	1.6	2.0	2.0	1.0	1.3			1.2	1.7	1.7		.3	1.1	1.3	2.9	1.4	1.8	.6
6,	1.9	.9	2.7	2.7	3.0	2.4	1.4	1.8	.8		2.0	2.7	1.9		.4	1.3	2.0	4.4	2.0	2.7	.7
7,	2.8	1.0	3.7	4.1	4.4			2.4	1.4	5.8	2.8	3.8	2.1		.7	1.7	3.0	5.8	2.8	3.5	.9
8,	4.0	1.3	4.9	6.1	5.8			3.0	2.0	8.0	4.9	5.7	3.0		1.0	2.2	3.2	7.9	3.8	4.0	1.6
9,	5.3	1.5	6.4	8.3	7.8			3.8	2.7	10.4	7.1	8.2	4.6		1.3	2.9	3.7	10.4	4.6	4.5	
10,	6.6	1.8	7.8	10.9	10.3			4.5	3.4		9.6	10.4	6.3	16.9	2.6	3.9	3.9	13.9	6.1	4.8	
11,	7.6							5.5	4.4							4.9			7.0		
12,	8.8															5.9			7.7		
13,	10.1																		8.2		
14,	11.3																				
15,	12.3																				
16,	13.5																				
17,	14.9																				

The last height given in each column is the average total height in 1916. Spacing in practically all cases was 4x4.

"A" Average diameter breast height in 1916 was 2.4 inches.

"B" Plantation on the Nolde Estate, Berks county. Average D. B. H. in 1916 was 1.3 inches. Heights for past years could not be measured.

"C" Plantation on the Nolde Estate, Berks county. Average D. B. H. in 1916 was 1.6 inches.

"D" Plantation on the Nolde Estate, Berks county.

"E" Plantation on the Nolde Estate, Berks county.

"F" Average diameter breast height in 1916 was 1.5 inches.

TABLE 43.—NURSERY INVENTORY, FALL OF 1917.

Species.	Age.	Asaph.	Clearfield.	Greenwood.	Mont Alto.	Caledonia.	Penfield	Black Forest.	Seven Mountains.	Medix.
White Pine,	1	365,728	27,900	200,000	300,000	136,850	7,000	106,000		
	2	158,817	2,900,048	400,000	1,569,000	79,980	295,000	180,000	1,900	
	3	623,700	850,400	600,000	925,000	90,556	195,000	12,000		2,500
	2–1	37,788		4,000						
	2–2					790				
	4						15,000			
Red Pine,	1	8,535			140,000					
	2	15,972	10,000	340,000	270,000	6,870		32,000		
	1–1			3,000						
Pitch Pine,	1							7,500		
	2	9,376	143,360	540,000	133,000	19,730	21,000	12,000		
	3		84,420							
	4									4,000
Jack Pine,	1	27,142	568,800	420,000			80,000			
	2				2,500					
Scotch Pine,	1	26,257				86,582				
	2		426,720	300,000		456	5,000	3,000	2,000	
	3	4,660	767,280	24,000	60,000		24,000			
Bull Pine,	2–1					1,120				
	1			35,000	15,000					
	2	877	3,200	8,000						
Norway Spruce,	1	111,992	317,808	100,000	40,000	116,910		44,520		
	2	250,029	792,712	240,000	245,000	5,920	48,000	92,200		
	3	271,569	950,528	50,000	110,000	4,796	28,000	25,000		
	4									
European Larch,	2–1	45,172		10,000						
	2–2	1,372								
	2–3			16,000						
Japanese Larch,	1	83,895	458,716		5,000		50,000	43,000		
	2	29,762	327,000	24,000			62,000	10,000		1,000
	3	24,680	188,500		1,000					
Douglas Fir,	1–1			1,000		240				
	1	25,392				15,920				
A. Concolor,	3			5,000	5,000					
Red Spruce,	2–1	4,769								
	2	263								
	5									
Picea pungens,	2				4					
	1	25,172	98,920			270				
	1				2,000					
	2				8,000					
Red Oak,	1	392	7,000							
White Ash,	1	81,927								
Sugar Maple,	2–1	6,967								
	2–1	4,305								
Honey Locust,	4	12								
Elm,	1	18,924								
Chinese Chestnut,	4	2,745								
Black Cherry,	5	52								
Arbor Vitae,	1						2,000			
	3	10,922								
	1				5,000					
	2	523	76,800	18,000	10,000					
Total,		2,278,788	9,000,112	3,338,000	3,845,504	566,984	832,000	568,200	3,900	7,500

TABLE 43.—Continued.

Species.	Age.	Pine Grove.	Austin.	Bald Eagle.	Nittany.	Cross Fork.	Sinnemahoning.	Whetham.	Snow Shoe.	Total.
White Pine,	1	40,090	10,000						1,220	1,194,698
	2		10,060	18,000	35,000	3,000	75,050	18,000	13,000	5,756,795
	3			5,200	20,000		13,400			3,337,756
Red Pine,	2-1									41,788
	2-2				1,800		5,860			8,450
	4									15,000
Pitch Pine,	1									148,535
	2									674,842
	1-1									3,000
	1									7,500
	2									878,463
	3			7,000						91,420
	4									4,000
Jack Pine,	1		100,000							1,195,942
	2									2,500
Scotch Pine,	1									112,839
	2									737,170
	3									879,949
Bull Pine,	2-1									1,120
	1									50,000
	2									12,077
Norway Spruce,	1	11,500	30,000							771,810
	2					18,000	75,855			1,767,716
	3			17,100						1,457,993
	4								12,000	12,600
European Larch,	2-1									55,172
	2-2									1,372
	2-3									16,000
	1	11,000								651,611
	2		1,000				60,230		23,000	537,992
	3									214,180
Japanese Larch,	1-1									1,240
	1									41,312
	3									10,000
Douglas Fir,	2-1									4,769
	2									263
	5			1,400						1,400
A. Concolor,	2									4
Red Spruce,	1									124,362
Picea pungens,	2									2,000
Red Oak,	1									8,000
White Ash,	1									7,392
Sugar Maple,	1									81,927
	2-1									6,967
	2-1									4,305
	4									12
Honey Locust,	1									18,924
Elm,	4									2,745
Chinese Chestnut,	5									52
Black Cherry,	1									2,000
	3									10,922
Arbor Vitae,	1									5,000
	2									105,323
Total,		62,500	151,000	48,700	56,800	21,000	230,395	18,000	49,220	*21,678,603

*Nursery reports classify these seedlings as follows:

(1) Should be shipped, Spring 1918, 8,282,074
(2) May be shipped, Spring 1918, 7,449,647
(3) Not ready for shipment, 5,346,882

TABLE 44.—LIGHTNING REPORT, 1912-1917 INCLUSIVE.

Species.	March.	April.	May.	June.	July.	August.	September.	October.	November.	Totals.
Chestnut,	1	20	53	184	268	230	73	6		835
Pitch Pine,		1	26	69	139	169	12	1		417
White Pine,		3	14	49	98	78	17	4		263
Rock Oak,		2	9	65	79	73	8	3		239
Hemlock,		2	12	31	74	55	26	1		201
Red Oak,		1	12	32	58	40	9		1	153
White Oak,		1	11	14	47	39	6	1		119
Black Oak,		2	7	13	27	20	3			72
Locust,			1	18	33	16	1			69
Sugar Maple,			3	9	4	5	3	1		25
Hickory,		1	2	3	10	9				25
Scarlet Oak,			2		10	11				23
Gum,			1	3	7	10				21
Pin Oak,				6	7	3				16
Red Maple,			1	4		6				11
Yellow Birch,		1	1		2	4	1			9
Wild Cherry,		1	1	3	1	2				8
Ash,		1	1	2	3	1				8
Linden,		2	1	1			1	1		6
Beech,		1		2	1	1	1			6
Walnut,				2	2	2				6
Tulip,					2	1	2			5
Elm,				1	1	3				5
Cucumber,				2				1		3
Poplar,		2		1						3
White Birch,					2					2
Red Pine,				1	1					2
Black Birch,					1					1
Totals,	1	41	158	515	877	778	163	19	1	2,553

TABLE 45.—TREES STRUCK AND IGNITED, 1912-1917, INCLUSIVE.

Species.	1912.	1913.	1914.	1915.	1916.	1917.	Totals.
White Pine,	7	3	12	1	5	1	29
Hemlock,	3	5	3	1	1		13
Chestnut,	4	3		3	1		11
Pitch Pine,	2	2	2	1			7
Sugar Maple,			3	2			5
Oak,	1	2					3
White Maple,		2					2
Ash,		1					1
Birch,		1					1
Elm,	1						1
Totals,	18	19	20	8	7	1	73

TABLE 46.—CONDENSATION OF FORESTERS' REPORTS FOR THE YEARS 1916-1917.

Forest and Forester.	Year.	Staff.	Area (acres).	Roads, trails and fire lines extended or improved (miles).	Contracts and leases.	Nurseries.	Labor (rate per hour).	Improvement cuttings.	Local Market Conditions.
Austin: Fox, P. H.,	1916	1 forester, 1 ranger,	25,000	13	none	.28a	$0 20	none	Small stuff and pulpwood.
	1917	1 forester, 1 ranger,	25,000		none	.10a	25	none	Small stuff and pulpwood.
Bald Eagle: Baer, C. E.,	1916	1 forester, 1 ranger,	17,000	24	none	1,600 sq. ft.	17½	none	Cordwood and furniture.
	1917	1 forester, 1 ranger,	17,000	11	none	1,600 sq. ft.	20	1	Cordwood and furniture stock, also mine props.
Barree: Morton, T. R.,	1916	1 forester, 2 rangers,	17,995	17	3	none	20	none	Small material.
	1917	1 forester, 2 rangers,	17,995	16	4	none	30	none	Small material.
Bear Meadows: Keller, J. W.	1916	1 forester, 2 rangers,	21,660	69	none	none	17	none	Hardwood.
	1917	1 forester, 2 rangers,	21,660	76	none	none	20	none	Hardwood.
Bedford: Byers, W. L.,	1916	1 forester, 1 ranger,	10,055	40	none	none	15	1	Poles and small material.
	1917	1 forester, 1 ranger,	10,364	41	1	none	17½	none	Poles and small material.
Black Forest: Morgan, H. H.	1916	1 forester, 2 rangers,	30,000	59	none	7,000 sq. ft.	19	none	Ties and props.
	1917	1 forester, 2 rangers,	30,000	54	none	9,100 sq. ft.	25	none	Ties and props.
Blackwell: Harbeson, T. C.	1916	1 forester, 2 rangers,	30,000	21	1	none	18	1	No local market.
	1917	1 forester, 2 rangers,	31,000	46	2	none	18	Small local sales	No local market.
Brumbaugh: Perry, Geo. S.	1916	1 forester,	6,146	5	none	none	15	none	Good.
	1917	1 forester,	6,146	18	none	none	22	1	Good.
Buchanan: Rupp, A. E.,	1916	1 forester, 2 rangers,	10,973	79	none	none	15	none	
	1917	1 forester, 2 rangers,	10,973	78	none	none	25	none	
Buffalo: Silvius, A. C.,	1916	1 forester, 1 assistant, 1 ranger,	20,628	1	none	none	17½	Remov. fire wood only	Small local demand.
	1917	1 forester, 1 ranger, 1 laborer,	20,628		none	none	20		Small local demand.
Caledonia: Conklin, R. G.	1915	1 for., 1 asst., 6 rangers, 4 lab.,	24,000	33	4	17,904 sq. ft.	Same	as last year	Much better demand.
	1917	1 forester, 5 rangers, 3 laborers,	24,000		4	17,904 sq. ft.	20	1	Much better demand.
*Chatham: Mulford, P. H.	1916	See Stone Forest.	13,231		2	200 sq. ft.	18	none	Can sell anything.
Clearfield: Dague, W. F.	1916	Combined with Stone Forest.							
	1917	1 forester, 1 ranger, 1 laborer,	14,662	41	none	separate rep.	20	none	Strong local demand.
Coudersport: Emerick, R. L.	1916	1 forester, 1 ranger,	14,662		none	separate rep.	25	none	Strong local demand.
	1917	1 forester, 1 ranger,	3,306	4	none	none	20	none	Good.
	1917	1 forester, 1 ranger;	3,306	4	none	none	25	none	Good.

*Combined with Stone forest in 1916.

TABLE 46.—Continued.

Forest and Forester.	Year.	Staff.	Area (acres).	Roads, trails and fire lanes extended or improved (miles).	Contracts and leases.	Nurseries.	Labor (rate per hour).	Improvement cuttings.	Local Market Conditions.
Grays Run: †Wells, A. B.	1916	1 forester,	7,447	18	none	none	17½	none	Good.
	1917								
Greenwood: Bietsch, T. O.	1916	1 forester, 4 rangers, 2 teamsters,	25,000		none	separate rep.	17½	1	Good.
	1917	1 forester, 4 rangers, 2 teamsters,	25,000	30	2	separate rep.	20	1	Good.
Hopkins: Dutlinger, F. H.	1916	1 forester, 2 rangers,	60,000	100	2	none	17½	1	Small local demand.
	1917	1 forester, 2 rangers,	60,000	70	2	none	25	1	Small local demand.
‡Hull: Van Horn, H. C.	1916	1 forester, 1 ranger,	25,889	60	none	7,500 sq. ft.	17½	2	Can sell anything.
	1917	1 ranger,	25,889		none	.15a	20	3	Can sell anything.
Jacks Mountain: Bartschat, W. J.	1916	1 forester, 3 rangers,	19,429	75	1		15	none	Small materials.
	1917	1 forester, 3 rangers,	19,429	79	none			none	Small materials.
Karthaus: Horning, W. H.	1916	1 forester, 2 rangers,	30,100	60	2		17½	none	Nothing to market.
	1917	1 forester, 2 rangers,	30,100	65	1			none	Nothing to market.
Kettle Creek: Muller, M. E.	1916	1 forester,	21,000	28	none	1,000 sq. ft.	17½	none	No local demand.
	1917	1 forester,	25,000	15	none	1,000 sq. ft.	20	none	No local demand.
Kishocoquillas: Warfield, D. K.	1916	1 forester, 1 assistant, 3 rangers,	35,800	30	none	none	22	2	Good.
	1917	1 forester, 3 rangers,	35,800	34	none	none	25	2	Good.
§Loyalsock: Bastian, J. A.	1916	1 forester, 2 rangers,	14,563	26	1	Discont.	17½	1	Poor.
	1917	1 forester, 2 rangers,	14,563	20	2	none	20	none	Poor.
‖Lushbaugh, Ryon, J. B.	1916	1 forester, 2 rangers,	37,877	25	1	.06a	20	1	Props, ties, cordwood.
	1917								
McClure: Bryner, H. E.	1916								
	1917	1 ranger,	6,093	15	none	none	18	none	Poor.
¶McElhattan: Hogentogler, J. R.	1916	1 forester, 1 ranger,	11,505	31	none	none	17½	none	Small demand.
	1917								
Medix: Zerby, C. E.,	1916	1 forester, 1 ranger,	24,000	24	none	1,200 sq. ft.	22½	none	Ties and mine timber.
	1917	1 forester, 1 ranger,	24,000	14	none	500 sq. ft.	35	none	Ties and mine timber.
Minisink: Avery, John,	1916	1 forester, 2 rangers,	35,000	56	none	none	20	none	
	1917	1 forester, 2 rangers,	35,000	65	none	none	25	none	
Mont Alto: Staley, L. E.	1916	1 forester, 4 rangers, 5 laborers,	29,000	75	2	Rep. elsewh.	15	{cont. from 1915}	Good for fuel, etc.
	1917	1 forester, 2 rangers, 6 laborers,	22,000		2	Rep. elsewh.	22½		Stronger demand.
New Bergen: Van Horn, H. C.	1916	1 forester, 1 ranger,	19,000	13	none	none	17½	none	Heading, poles, posts.
	1917								
Nittany: Barnes, L. G.,	1916	1 forester, 1 laborer,	4,145	10	2	11,500 sq. ft.	15	1	Good.
	1917	1 forester, 1 ranger,	4,145	6	1	1,000 sq. ft.	20	1	Good.
Ole Bull: Golden, T. H.	1916	1 forester, 2 rangers, 1 teamster,	41,577	30	none	12,400 sq. ft.	17½	1	Poor.
	1917	1 forester, 1 teamster, 2 rangers,	41,577	20	none	9,900 sq. ft.	20	none	Poor.
Penfield: Kirk, C. L.,	1916	1 forester, 1 ranger,	9,629	41	1	21,000 sq. ft.	20	none	Mine timbers.
	1917	1 forester, 1 ranger,	9,629	41	1	.5a	40	none	Mine timbers.
Penn: 1916, Meek, C. R. 1917, Detz, L. M.	1916	1 forester, 1 ranger,	15,000	56	none	none	17½	none	Small local market.
	1917	1 forester, 1 ranger,	15,000	56	none	none	25	none	Small local market.
Pennypacker: Bryner, H. E.	1916	1 forester, 3 rangers,	29,000	90	1	none	16	2	Poor.
	1917	1 forester, 3 rangers,	29,500	100	1	none	18	2	Much better than 1916.
Pine: Neefe, R. R.,	1916	1 forester, 3 rangers,	35,783	95	4	none	20	2	Poor.
	1917	1 forester, 3 rangers,	39,783	110	2	none	25	2	Good for mine timbers.
Pine Grove: Williams, J. R.	1916	1 forester, 1 assistant, 6 laborers,	18,131		3	.11a	13	3	Cordwood and mine timbers.
	1917	1 forester, 4 rangers, 2 laborers,	18,347		3	.09a	22½	1	Good demand.
Pocono: Strobeck, J. L.	1916	1 forester, 1 assistant, 2 laborers,	22,736		1	none	17½	2	Good for mine timbers.
	1917	1 forester, 2 laborers,	22,736	7	none	none	22½	1	Good for mine timbers.
Promised Land: Stadden, R. W.	1916	1 forester, 1 ranger,	12,600	3	none	none	18	none	Poor.
	1917								
Rothrock: Bodine, A. W.; Bastian, J. A.	1916	1 forester, 1 ranger,	19,527	33	none	none	19	1	Good.
	1917	1 forester, 1 ranger,	19,527		none	none	25	1	Good.
Seven Mountains: Montgomery, W. E.; J. W. Keller; L. M. Detz.	1916	1 forester, 1 ranger,	14,000	41	1	8,000 sq. ft.	17	1	Good.
	1917	1 ranger,	14,000	65	none	8,000 sq. ft.	20	none	Good.
Sinnemahoning: Elliott, H. E.	1916	1 forester, 2 rangers,	25,000	31	1	2,200 sq. ft.	22½	1	Good.
	1917	1 forester, 2 rangers,	25,000	25	1	2,200 sq. ft.	25	1	Good.
Sizerville: Evans, W. B.; Elliott, H. E.	1916	1 forester, 1 laborer,	21,980	40	none		19	none	Cordwood.
	1917	1 forester,	21,980	28	none		25	none	Cordwood.
Slate Run: administered by R. R. Neefe.	1916	1 ranger,	28,000	21	none		20	none	Same as Pine Forest.
	1917	1 ranger,	28,000	44	none		25	none	Same as Pine Forest.
Snow Shoe: G. W. Sheeler.	1916	1 forester, 2 rangers,	22,500	35	none	2 small	20	none	Mine timbers.
	1917	Combined with Hopkins Forest.							
Stone: Mulford, P. H.,	1916	1 forester, 1 assistant, 2 rangers,	25,367		none	separate rep.	18	none	Good demand.
	1917	1 forester, 1 ranger,	25,367	7	2	separate rep.	18	2	Good demand.
Stuart: Bearer, V. M.,	1916	1 forester, 1 ranger,	8,532	32	1		21	none	Mine timbers.
	1917	1 forester, 1 ranger,	8,532	35	none	none	25	none	Mine timbers.
Tea Spring: Metzger, H. S.	1916	1 forester, 2 rangers,	26,000	69	none	none	15	none	Small local demand.
	1917	1 forester, 2 rangers,	26,000	69	none	none	25	1	Small local demand.
Whetham: Blouse, J. R.	1916	1 forester, 2 rangers,	19,080	30	1	.07a	20	none	Ties, props, cordwood.
White Deer: Winter, R. B.	1916	1 forester, 2 rangers,	22,500	34	none	400 sq. ft.	15	none	Building material.
	1917	1 forester, 2 rangers,	22,500	60	none	none	20	none	Building material.
Young Woman's Creek: Critchley, H. F.	1916	1 forester, 1 ranger,	30,000	20	1	none	25	none	Mine timber and cordwood.

†Administered by Forester Neefe during 1917.
§Administered by Forester Neefe during 1917.
‡Administered by Forester Fox during 1917.
‖Combined with Sinnemahoning forest and administered by Forester Elliott, 1917.
¶Administered by Forester Metzger during 1917.

TABLE 46.—Continued.

Forest and Forester.	Year.	Growth Data.	Insects and Fungi.	Fires. Number.	Fires. Area burned.	Violations of Game, Fish and Forestry Laws.	Outing and Recreation.
Austin: Fox, P. H.	1916	Taken for plantation.	Blight and weevil,	1	10	None,	
	1917	None.	Blight and weevil,			None,	
Bald Eagle: Baer, C. E.	1916	Taken for plantations,	Walking stick,			2,	250 hunters.
	1917	Taken for plantations.	White pine weevil,	1	1,500	1 doe—fine paid,	250 hunters.
Barree: Morton, T. R.,	1916	Taken for plantations,	Weevil, chestnut blight, chewing insect on white pine.	4	86	None,	22 camp sites leased.
	1917	Taken for plantations,	Weevil, chestnut blight, chewing insect on white pine.	4	204	A few of game laws,	23 camp sites leased.
Bear Meadows: Keller, J. W.	1916	Taken for plantations.	Blight, weevil and fungus on oak.			None,	13 camp sites leased.
	1917	Taken for plantations,	Blight, weevil and fungus on oak.	1	5,204	None,	17 camp sites leased.
Bedford: Byers, W. L.,	1916	Taken for plantations,	Blight and weevil,	3	160	None,	
	1917	Taken for plantations,	Blight, weevil, red ants,			None,	
Black Forest: Morgan, H. H.	1916	Taken for plantations.	Weevil,			None,	Game refuge established.
	1917	Plantations and sample plots,	Weevil,				200 campers.
Blackwell: Harbeson, T. C.	1916	Plantations and sample plots,	Blight and weevil,	4	18		11 sites leased—250 campers.
	1917	Plantations and sample plots,	Blight and weevil,	2	13	None,	250 campers.
Brumbaugh: Perry, Geo. S.	1916	None,	Blight and weevil,	2	2,100	1 of game laws,	43 campers.
	1917	None;	Blight and weevil,			None,	450 campers and visitors.
Buchanan: Rupp, A. E.,	1916	Taken for plantations,	Weevil,	2	20	None,	310 campers and visitors.
	1917	Taken for plantations.	Blight and weevil,			None,	100 campers and visitors.
Buffalo: Silvius, A. C.,	1916	Sample plots and plantations,	Blight and weevil,	2	3,500	1 settled without suit.	150 campers.
	1917	Sample plots and plantations,	Blight and weevil,	2	3	None,	92 campers.
Caledonia: Conklin, R. G.	1916	Nineteen plots measured,		6	20	2 timber trespass,	6 camp sites leased.
	1917	Nineteen plots measured,	Blight and weevil,	6	1,606	None,	6 camp sites leased.
*Chatham: Mulford, P. H.	1916	Taken for plantations,	Blight and weevil,	1	30	None,	
	1917						
Clearfield: Dague, W. F.	1916	Taken for plantations,	Blight and weevil,			None,	17 camp sites leased.
	1917	None,	Blight and weevil,			None,	20 camp sites leased.
Coudersport: Emerick, R. L.	1916	None,	None,			None,	
	1917	None,	None,			None,	
†Grays Run: Wells, A. B.	1916	Taken for plantations,				None,	150 hunters.
	1917		Blight and willow curculio,				
Greenwood: Bietsch, T. O.	1916	Taken for plantations.	Blight and weevil,			2 referred to game warden,	19 camp sites leased; game preserves enlarged.
	1917	Taken for plantations,	Blight, weevil, peridermium,			1 referred to game warden,	
Hopkins: Dutlinger, F. H.	1916	Plantations, sample plots.	Blight and weevil,	3	201	None,	5 camp sites leased.
	1917	Taken for plantations,	Blight and weevil,			None,	
‡Hull: Van Horn, H. C.	1916	Taken for plantations,	Blight, weevil, caterpillars,			None,	
	1917	None,	Blight,	4	52	None,	
Jacks Mountain: Bartschat, W. J.	1916		Blight,	4	1,715	2 referred to game wardens; 1 case trespass.	800 visitors and campers.
	1917		Blight and weevil,			1 forest fire case,	8 camp sites leased.
Karthaus: Horning, W. H.	1916	Taken for plantations,	Blight and weevil,	1	3	None,	700 campers and visitors.
	1917	Taken for plantations,	Blight and weevil,			None.	800 campers and visitors.
Kettle Creek: Muller, M. E.	1916	Taken for plantations,	Weevil,			None.	540 campers and visitors.
	1917	Taken for plantations,	Weevil and blight,	5	835	None,	
Kishacoquillas: Warfield, D. K.	1916	Taken for plantations,	Borer on red pines, ants,			1 timber trespass,	19 camp sites leased.
	1917	Taken for plantations,	Borer on red pines, ants,	1	40	None,	400 campers.
§Loyalsock: Bastian, J. A.	1916	Taken for plantations,	Blight and weevil,			None,	2 leased camp sites.
	1917		Blight and weevil,			None,	
‖Lushbaugh, Ryon, J. B.	1916	Taken for plantations,	Blight,	1	6,000	None,	3 leased camp sites.
	1917						
McClure: Bryner, H. E.	1916						
	1917	None,	Blight and weevil,	1	800	None,	
¶McElhattan: Hogentogler, J. R.	1916	Taken for plantations,	Blight,	3	390	1 timber trespass,	
	1917						
Medix: Zerby, C. E.,	1916	Taken for plantations,	Blight and weevil,	2	105	1 doe shot,	21 camp sites leased; 200 campers.
	1917	Taken for plantations,	Blight and weevil,	1	200	None.	150 campers.
Minisink: Avery, John,	1916	Taken for plantations,	Blight and weevil,	1	250	None,	25 camp sites leased.
	1917	None,	Blight and weevil,			1 doe shot,	30 camp sites leased.
Mont Alto: Staley, L. E.	1916	Taken for plantations,	Blight and weevil,	52	570	Timber trespass, illegal hunting.	500 hunters.
	1917	Taken for plantations,	Blight and weevil,	67	3,352	1 fire case,	
New Bergen: Van Horn, H. C.	1916	Taken for plantations,	Weevil and ants,	3	160	None,	
	1917						
Nittany: Barnes, L. G.,	1916	Taken for plantations.	Blight and weevil,			1 of game laws,	30 hunters.
	1917	Taken for plantations,	Blight, weevil, needle rust,			None,	30 hunters.
Ole Bull: Golden, T. H.	1916	Taken for plantations,	Blight and weevil,	4	10	None,	200 campers.
	1917	None,	Blight and weevil,	3	105	None,	10 camp sites leased.
Penfield: Kirk, C. L.,	1916	Taken for plantations,	Blight,	1	10	None,	4 camp sites leased.
	1917	Taken for plantations,	Blight,	1	100	None,	4 camp sites leased.

*Combined with Stone forest in 1916.
†Administered by Forester Neefe during 1917.
§Administered by Forester Neefe during 1917.
‡Administered by Forester Fox during 1917.
‖Combined with Sinnemahoning forest and administered by Forester Elliott, 1917.
¶Administered by Forester Metzger during 1917.

TABLE 46.—Continued.

Forest and Forester.	Year.	Growth Data.	Insects and Fungi.	Fires. Number.	Fires. Area burned.	Violations of Game, Fish and Forestry Laws.	Outing and Recreation.
Penn: 1916, Meek, C. R.	1916	Taken for plantations,	Blight and weevil,	4	77	None,	100 campers; 4 leased camp sites.
1917, Detz, L. M.	1917	None,	Blight and weevil,	7	210	None,	100 campers; 4 leased camp sites.
Pennypacker: Bryner, H. E.	1916	Taken for plantations,	Blight, weevil, chermes, and girdle.	3	163	None,	
	1917	None,					
Pine: Neefe, R. R.,	1916	Taken for plantations,	Blight, weevil, chermes, and	3	555	None,	2 camp sites leased.
	1917	None,	Blight and weevil,	6	1,855	A few game laws,	18 camp sites leased.
Pine Grove: Williams, J. R.	1916	Taken for plantations,	Blight and weevil,	1	2,000	1 of forestry laws,	310 campers.
	1917	Taken for plantations,	Blight and weevil,	9	861	None,	1,000 campers and visitors.
Pocono: Strobeck, J. L.	1916	Taken for plantations,	Blight and weevil,	25	4,421	Reported to game warden,	13 camp sites leased.
	1917	None,	Blight and weevil,	3	64	None,	12 camp sites leased.
Promised Land: Stadden, R. W.	1916	Taken for plantations,	Blight and weevil,	4	285	None,	14 camp sites leased.
	1917		Blight and weevil,	1	100	1 of fish laws,	4,700 campers and visitors.
Rothrock: Bodine, A. W.; Bastian, J. A.	1916	None,	Blight and weevil,	4	1,925	1 timber trespass,	725 campers and visitors.
	1917	None,	Blight and weevil,	2	602	None,	20 camp sites leased.
Seven Mountains: Montgomery, W. E.; J. W. Keller; L. M. Detz.	1916	Taken for plantations,	Blight and weevil,	1	1	None,	1 camp site leased.
	1917	None,	Blight and weevil,			None,	2 camp sites leased.
Sinnemahoning: Elliott, H. E.	1916	Taken for plantations,	Blight,			None,	11 camp sites leased.
	1917	None,	Blight and weevil,			None,	15 camp sites leased.
Sizerville: Evans, W. B.; Elliott, H. E.	1916	Taken for plantations,	Weevil,	2	80	None,	2 camp sites leased.
	1917	None,	Weevil,	3	201	None,	2 camp sites leased.
Slate Run: administered by R. R. Neefe.	1916	Taken for plantations,	Blight and weevil,			None,	4 camp sites leased.
	1917	None,	Blight and weevil,			None,	6 camp sites leased.
Snow Shoe: G. W. Sheeter.	1916	None,	Blight,	1		1 timber trespass,	5 camp sites leased.
	1917						
Stone: Mulford, P. H.,	1916	Taken for plantations,	Weevil and Evetria,	3	1,130	1 timber trespass,	2 camp sites leased.
	1917	None,	Weevil, Evetria, blight,	3	38	None,	3 camp sites leased.
Stuart: Bearer, V. M.,	1916	Taken for plantations,	No serious damage,			None,	1 camp site leased.
	1917	Taken for plantations,	No serious damage,			None,	1 camp site leased.
Tea Spring: Metzger, H. S.	1916	None,	Blight and W. P. borer,	2	500	None,	5 camp sites leased.
	1917	None,	Blight and W. P. borer,			None,	6 camp sites leased.
Whetham: Blouse, J. R.	1916	None,	Blight and weevil,	3	5	None,	15 camp sites leased.
White Deer: Winter, R. B.	1916	Taken for plantations,	Blight,	1	85	None,	700 campers and visitors.
	1917	None,	Blight and weevil,			None,	12 camp sites leased.
Young Woman's Creek: Critchley, H. F.	1916	Taken for plantations,	Locust borer,			None,	10 camp sites leased.

TABLE 47.—FIXED CHARGES ON STATE LAND FOR ROAD AND SCHOOL PURPOSES.

County.	Township.	1916.				1917.			
		Acres for road purposes.	Amount for road purposes.	Acres for school purposes.	Amount for school purposes.	Acres for road purposes.	Amount for road purposes.	Acres for school purposes.	Amount for school purposes.
Adams,	Franklin,	11,128	$222 56	11,128	$222 56	11,128	$222 56	11,128	$222 56
Adams,	Hamiltonban,	4,746	94 92	4,746	94 92	4,746	94 92	4,746	94 92
Adams,	Menallen,	5,012	100 24	5,012	100 24	5,012	100 24	5,012	100 24
Bedford,	Colerain,	2,167	43 34	2,167	43 34	2,167	43 34	2,167	43 34
Bedford,	Cumberland Valley,	749	14 98	749	14 98	749	14 98	749	14 98
Bedford,	Southampton,	7,102	142 04	7,102	142 04	7,102	142 04	7,102	142 04
Cameron,	Gibson,	26,049	520 98	20,487	409 74	26,049	520 98	20,487	409 74
Cameron,	Grove,	30,444	608 88	23,836	476 72	30,444	608 88	23,836	476 72
Cameron,	Lumber,	15,241	304 82	15,241	304 82	15,241	304 82	15,241	304 82
Cameron,	Portage,	2,463	49 26	2,463	49 26	2,463	49 26	2,463	49 26
Cameron,	Independent District,			12,170	243 40			12,170	243 40
Cameron,	Shippen,								
Centre,	Burnside,	6,997	139 94	6,997	139 94	6,997	139 94	6,997	139 94
Centre,	Curtin,	20,980	419 60	20,980	419 60	20,980	419 60	20,980	419 60
Centre,	Ferguson,	2,453	49 06	2,453	49 06	2,453	49 06	2,453	49 06
Centre,	Gregg,	925	18 50	925	18 50	925	18 50	925	18 50
Centre,	Haines,	2,907	58 14	2,907	58 14	2,907	58 14	2,907	58 14
Centre,	Harris,	14,414	288 28	14,414	288 28	14,414	288 28	14,414	288 28
Centre,	Miles,	10,407	208 14	10,407	208 14	10,407	208 14	10,407	208 14
Centre,	Penn,	7,999	159 98	7,999	159 98	7,999	159 98	7,999	159 98
Centre,	Potter,	4,244	84 88	4,244	84 88	4,244	84 88	4,244	84 88
Centre,	Rush,	7,598	151 96	7,598	151 96	7,598	151 96	7,598	151 96
Centre,	Spring,	3,038	60 76	3,038	60 76	3,038	60 76	3,038	60 76
Centre,	Walker,	1,957	39 14	1,957	39 14	1,957	39 14	1,957	39 14
Clearfield,	Covington,	1,523	30 46	1,523	30 46	1,523	30 46	1,523	30 46
Clearfield,	Girard,	483	9 66	483	9 66	483	9 66	483	9 66
Clearfield,	Goshen,	11,349	226 98	11,349	226 98	11,349	226 98	11,349	226 98
Clearfield,	Huston,	1,964	39 28	1,964	39 28	1,964	39 28	1,964	39 28
Clearfield,	Karthaus,	8,491	169 82	8,491	169 82	8,491	169 82	8,491	169 82
Clearfield,	Pike,	7,233	144 66	7,233	144 66	7,233	144 66	7,233	144 66
Clearfield,	Pine (part of Lawrence for school purposes),	1,930	38 60	1,930	38 60	1,930	38 60	1,930	38 60
Clearfield,	Sandy,	15,216	304 32	15,216	304 32	15,216	304 32	15,216	304 32
Clearfield,	Union,	610	12 20	610	12 20	610	12 20	610	12 20
Clinton,	Beech Creek,	230	4 60	230	4 60	230	4 60	230	4 60
Clinton,	Castanea,	15,739	314 78	15,739	314 78	15,739	314 78	15,739	314 78
Clinton,	Chapman,	60	1 20	60	1 20	60	1 20	60	1 20
Clinton,	Colebrook,	24,679	493 58	24,679	493 58	24,679	493 58	24,679	493 58
Clinton,	Crawford,	721	14 42	721	14 42	721	14 42	721	14 42
Clinton,	East Keating,	1,586	31 72	1,586	31 72	1,586	31 72	1,586	31 72
Clinton,	Gallagher,	3,631	73 22	3,631	73 22	3,631	73 22	3,631	73 22
Clinton,	Green,	6,259	125 18	6,259	125 18	6,259	125 18	6,259	125 18
Clinton,	Grugan,	3,553	71 06	3,553	71 06	3,553	71 06	3,553	71 06
Clinton,	Lamar,	10,314	206 28	10,314	206 28	10,314	206 28	10,314	206 28
Clinton,	Leidy,	4,071	81 42	4,071	81 42	4,071	81 42	4,071	81 42
Clinton,	Noyes,	21,091	421 82	21,091	421 82	21,245	424 90	21,245	424 90
Clinton,	Pine Creek,	26,395	527 90	26,395	527 90	26,395	527 90	26,395	527 90
Clinton,	Wayne,	795	15 90	795	15 90	795	15 90	795	15 90
Clinton,	West Keating,	5,163	103 26	5,163	103 26	5,163	103 26	5,163	103 26
Clinton,	Woodward,	3,643	72 86	3,643	72 86	3,643	72 86	3,643	72 86
Cumberland,	Cooke,	1,360	27 20	1,360	27 20	1,360	27 20	1,360	27 20
Cumberland,	Dickinson,	9,091	181 82	9,091	181 82	9,168	183 36	9,168	183 36
Cumberland,	Frankford,	5,725	114 50			5,725	114 50		
Cumberland,	Hopewell,	291	5 82	291	5 82	327	6 54	327	6 54
Cumberland,	Lower Mifflin,	444	8 88	444	8 88	444	8 88	444	8 88
Cumberland,	Newton,	3,012	60 24	3,012	60 24	3,130	62 60	3,130	62 60
Cumberland,	Penn,	98	1 96			98	1 96	98	1 96
Cumberland,	Southampton,	365	7 30	365	7 30	365	7 30	365	7 30
Cumberland,	Upper Mifflin,	1,155	23 10			1,155	23 10	1,155	23 10
Dauphin,	Jackson,	269	5 38	269	5 38	269	5 38	269	5 38
Elk,	Benezeette,	3,354	67 08	3,354	67 08	3,354	67 08	3,354	67 08
Elk,	Horton,	14,557	291 14	14,557	291 14	14,557	291 14	14,557	291 14
Franklin,	Fannett,	283	5 66	283	5 66	283	5 66	283	5 66
Franklin,	Greene,	3,668	73 36	3,668	73 36	3,668	73 36	3,668	73 36
Franklin,	Guilford,	5,849	116 98	5,849	116 98	5,849	116 98		
Franklin,	Hamilton,	3,704	74 08	3,704	74 08	3,704	74 08	3,704	74 08
Franklin,	Letterkenny,	994	19 88	994	19 88	994	19 88	994	19 88
Franklin,	Metal,	3,197	63 94	3,197	63 94	3,197	63 94	3,197	63 94
Franklin,	Peters,	524	10 48	524	10 48	524	10 48	524	10 48
Franklin,	Quincy,	538	10 76	538	10 76	538	10 76	538	10 76
Franklin,	Southampton,	9,624	192 48	9,624	192 48	9,624	192 48	9,624	192 48
Franklin,	Washington,	3,573	71 46			3,573	71 46		
Fulton,	Dublin,	2,239	44 78	2,239	44 78	2,239	44 78	2,239	44 78
Fulton,	Todd,	1,255	25 10	1,255	25 10	1,255	25 10	1,255	25 10
Huntingdon,	Barree,	5,045	100 90	5,045	100 90	5,045	100 90	5,045	100 90
Huntingdon,	Brady,	2,940	58 80	2,940	58 80	2,940	58 80	2,940	58 80
Huntingdon,	Cass,	295	5 90	295	5 90	295	5 90	295	5 90
Huntingdon,	Franklin,	2,609	52 18	2,609	52 18	2,609	52 18	2,609	52 18
Huntingdon,	Jackson,	4,189	83 78	4,189	83 78	4,189	83 78	4,189	83 78
		26,100	522 00	26,100	522 00	26,105	522 10	26,105	522 10

TABLE 47—Continued.

County.	Township.	1916.				1917.			
		Acres for road purposes.	Amount for road purposes.	Acres for school purposes.	Amount for school purposes.	Acres for road purposes.	Amount for road purposes.	Acres for school purposes.	Amount for school purposes.
Huntingdon,	Lincoln,	855	17 10	855	17 10	855	17 10	855	17 10
Huntingdon,	Logan,	4,123	82 45	4,123	82 46	4,123	82 46	4,123	82 46
Huntingdon,	Miller,	2,562	51 24	2,562	51 24	2,562	51 24	2,562	51 24
Huntingdon,	Morris,	168	3 36	168	3 36	168	3 36	168	3 36
Huntingdon,	Penn,	613	12 26	613	12 26	613	12 26	613	12 26
Huntingdon,	Porter,	1,150	23 00	1,150	23 00	1,150	23 00	1,150	23 00
Huntingdon,	Shirley,	3,645	72 90	3,645	72 90	3,645	72 90	3,645	72 90
Huntingdon,	Spruce Creek,	221	4 42	221	4 42	221	4 42	221	4 42
Huntingdon,	Todd,	1,002	20 04	1,002	20 04	1,002	20 04	1,002	20 04
Huntingdon,	Union,	1,068	21 36	1,068	21 36	1,068	21 36	1,068	21 36
Huntingdon,	West,	5,745	114 90	5,745	114 90	5,745	114 90	5,745	114 90
Juniata,	Lack,	1,951	39 02	1,951	39 02	1,951	39 02	1,951	39 02
Juniata,	Milford,	109	2 18	109	2 18	109	2 18	109	2 18
Juniata,	Tuscarora,	1,118	22 36	1,118	22 36	1,118	22 36	1,118	22 36
Lackawanna,	Lehigh,	4,956	99 12	4,956	99 12	4,956	99 12	4,956	99 12
Lycoming,	Armstrong,	2,352	47 04	2,352	47 04	2,352	47 04	2,352	47 04
Lycoming,	Brady,	610	12 20	610	12 20	610	12 20	610	12 20
Lycoming,	Brown,	19,993	399 86	19,993	399 86	19,993	399 86	19,993	399 86
Lycoming,	Clinton,	2,233	44 66	2,233	44 66	2,233	44 66	2,233	44 66
Lycoming,	Cogan House,	375	7 50	375	7 50	375	7 50	375	7 50
Lycoming,	Cummings,	19,140	382 80	19,140	382 80	19,140	382 80	19,140	382 80
Lycoming,	Gamble,	5,107	102 14	5,107	102 14	5,107	102 14	5,107	102 14
Lycoming,	Lewis,	4,289	85 78	4,289	85 78	4,343	86 86	4,343	86 86
Lycoming,	Limestone,	819	16 38	819	16 38	819	16 38	819	16 38
Lycoming,	McIntyre,	2,311	46 22	2,311	46 22	2,311	46 22	2,311	46 22
Lycoming,	McHenry,	17,806	356 12	17,806	356 12	17,806	356 12	17,806	356 12
Lycoming,	Nippenose,	110	2 20	110	2 20	110	2 20	110	2 20
Lycoming,	Plunketts Creek,	8,598	171 96	8,598	171 96	8,598	171 96	8,598	171 96
Lycoming,	Washington,	3,969	79 38	3,969	79 38	3,969	79 38	3,969	79 38
Lycoming,	Watson,	1,215	24 30	1,215	24 30	1 215	24 30	1,215	24 30
Mifflin,	Armagh,	27,926	558 52	27,926	558 52	27,926	558 52	27,926	558 52
Mifflin,	Bratton,	8,028	160 56	8,028	160 56	8,028	160 56	8,028	160 56
Mifflin,	Brown,	5,871	117 42	5,871	117 42	5,871	117 42	5,871	117 42
Mifflin,	Decatur,	942	18 84	942	18 84	942	18 84	942	18 84
Mifflin,	Granville,	80	1 60	80	1 60	80	1 60	80	1 60
Mifflin,	Menno,	314	6 28	314	6 28	314	6 28	314	6 28
Mifflin,	Union,	202	4 04	202	4 04	202	4 04	202	4 04
Mifflin,	Wayne,	6,163	122 26	6,163	123 26	6,163	123 26	6,163	123 26
Monroe,	Barrett,	856	17 12	856	17 12	856	17 12	856	17 12
Monroe,	Middle Smithfield,	1,545	30 90	1,545	30 90	1,545	30 90	1,545	30 90
Monroe,	Price,	4,000	80 00	4,000	80 00	4,000	80 00	4,000	80 00
Perry,	Jackson,	7,851	157 02	7,851	157 02	7,851	157 02	7,851	157 02
Perry,	Madison, N. E.,	1,236	24 72	1,236	24 72	1,236	24 72	1,236	24 72
Perry,	Madison, S. W.,	497	9 94	497	9 94	497	9 94	497	9 94
Perry,	Toboyne,	16,557	331 14	16,557	441 14	16,557	331 14	16,557	331 14
Perry,	Tyrone,	330	6 60	330	6 60	1,235	24 70	1,235	24 70
Pike,	Blooming Grove,	11,826	236 52	11,826	236 52	11,826	236 52	11,826	236 52
Pike,	Delaware,	1,324	26 48	1,324	26 48	1,324	26 48	1,324	26 48
Pike,	Dingman,	5,185	103 70	5,185	103 70	5,185	103 70	5,185	103 70
Pike,	Greene,	3,043	60 86	3,043	60 86	3,043	60 86	3,043	60 86
Pike,	Lackawaxen,	2,357	47 14	2,357	47 14	2,357	47 14	2,357	47 14
Pike,	Lehman,	3,627	72 54	3,627	72 54	3,627	72 54	3,627	72 54
Pike,	Milford,	782	15 64	782	15 64	782	15 64	782	15 64
Pike,	Palmyra,	3,928	78 56	3,928	78 56	3,928	78 56	3,928	78 56
Pike,	Porter,	21,542	430 84	21,542	430 84	21,542	430 84	21,542	430 84
Pike,	Shohola,	479	9 58	479	9 58	479	9 58	479	9 58
Pike,	Westfall,	3,161	63 22	3,161	63 22	3,161	63 22	3,161	63 22
Potter,	Abbott,	20,360	407 20	20,360	407 20	20,360	407 20	20,360	407 20
Potter,	Austin borough,	568	11 36	568	11 36	568	11 36	568	11 36
Potter,	East Fork,	5,636	112 72	5,636	112 72	5,636	112 72	5,636	112 72
Potter,	Eulalia,	1,809	36 18	1,809	36 18	1,809	36 18	1,809	36 18
Potter,	Homer,	10,802	216 04	10,802	216 04	10,902	218 04	10,902	218 04
Potter,	Keating,	4,243	84 86	4,243	84 86	4,243	84 86	4,243	84 86
Potter,	Portage,	14,499	289 98	14,499	289 98	14,499	289 98	14,499	289 98
Potter,	Roulette,	1,497	29 94	1,497	29 94	1,497	29 94	1,497	29 94
Potter,	Stewardson,	41,953	839 06	41,953	839 06	41,953	839 06	41,953	839 06
Potter,	Summit,	14,557	291 14	14,557	291 14	14,557	291 14	14,557	291 14
Potter,	Sylvania,	4,396	87 92	4,396	87 92	4,396	87 92	4,396	87 92
Potter,	West Branch,	876	17 52	876	17 52	876	17 52	876	17 52
Potter,	Wharton,	8,411	168 22	8,411	168 22	8,411	168 22	8,411	168 22
Snyder,	Adams,	3,642	72 84	3,642	72 84	3,642	72 84	3,642	72 84
Snyder,	Centre,	374	7 48	374	7 48	374	7 48	374	7 48
Snyder,	Franklin,	948	18 96	948	18 96	948	18 96	948	18 96
Snyder,	Perry,	1,000	20 00	1,000	20 00	1,000	20 00	1,000	20 00
Snyder,	Spring,	6,084	121 68	6,084	121 68	6,084	121 68	6,084	121 68
Snyder,	West Beaver,	4,013	80 26	4,013	80 26	4,013	80 26	4,013	80 26
Snyder,	West Perry,	3,025	60 50	3,025	60 50	3,025	60 50	3,025	60 50
Somerset,	Jefferson,	1,043	20 86	1,043	20 86	1,043	20 86	1,043	20 86

TABLE 47.—Continued.

County.	Township.	1916.				1917.			
		Acres for road purposes.	Amount for road purposes.	Acres for school purposes.	Amount for school purposes.	Acres for road purposes.	Amount for road purposes.	Acres for school purposes.	Amount for school purposes.
Somerset,	Jenner,	1,499	29 98	1,499	29 98	1,499	29 98	1,499	29 98
Somerset,	Lincoln,	925	18 50	925	18 50	925	18 50	925	18 50
Tioga,	Chatham,	1,188	23 76	1,188	23 76	1,188	23 76	1,188	23 76
Tioga,	Clymer,	744	14 88	744	14 88	744	14 88	744	14 88
Tioga,	Delmar,	5,529	110 58	5,529	110 58	5,529	110 58	5,529	110 58
Tioga,	Duncan,	1,052	21 04	1,052	21 04	1,052	21 04	1,052	21 04
Tioga,	Elk,	14,295	285 90	14,295	285 90	14,295	285 90	14,295	285 90
Tioga,	Middlebury,	1,955	39 10	1,955	39 10	1,955	39 10	1,955	39 10
Tioga,	Morris,	18,067	361 34	18,067	361 34	18,067	361 34	18,067	361 34
Tioga,	Shippen,	14,576	291 52	14,576	291 52	14,576	291 52	14,576	291 52
Union,	Hartley,	26,519	530 38	26,519	530 38	26,519	530 38	26,519	530 38
Union,	Lewis,	20,768	415 36	20,768	415 36	20,768	415 36	20,768	415 36
Union,	West Buffalo,	4,033	80 66	4,033	80 66	4,033	80 66	4,033	80 66
Union,	White Deer,	2,355	47 10	2,355	47 10	2,355	47 10	2,355	47 10
Westmoreland,	Cook,	4,321	86 42	4,321	86 42	4,321	86 42	4,321	86 42
Westmoreland,	Ligonier,	744	14 88	744	14 88	744	14 88	744	14 88
Wyoming,	Eaton,	1,177	23 54	1,177	23 54	1,177	23 54	1,177	23 54
		1,009,474	$20,189 48	908,923	$19,978 46	1,010,923	$20,218 46	995,776	$19,915 52

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END OF REEL
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